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# **GLEANINGS OF THE BEE CULTURE** A JOURNAL DEVOTED TO BEES, AND HONEY, AND HOME INTERESTS. ILLUSTRATED SEMI-MONTHLY Published by THE A. I. ROOT CO. \$1.25 PER YEAR MEDINA, OHIO.

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## **STRAY STRAWS** FROM DR. C. C. MILLER.

THE PLAN given by W. H. Eagerty, p. 666, for sowing sweet clover, is the best I've ever seen, especially having the seed tramped in by horses.

WHEW! but haven't we had a hot September—at least the first half? [Yes; and three days afterward there was a fall of 50 degrees in the temperature.—ED.]

SCOTTISH HEATHER, we are told on p. 663, abounds in New Jersey. Is there no mistake about this? Never heard before that it grew anywhere in this country.

ANY OPENING for ventilation that comes close to the sections hinders greatly their sealing at that point; but it has seemed rather an advantage for extracted honey.

BRO. A. I. ROOT, tell that high-pressure-gardening man who got 200 bushels of pickles from an acre to come to Marengo and learn how to raise pickles. John Boyle got 236 bushels from three-fourths of an acre.

MCINTYRE is right, p. 670, that stirring honey hastens granulation—one reason, probably, why extracted granulates sooner than comb. The Germans sometimes put honey through a sort of churning process to hasten granulation.

REFERRING to p. 671, I don't think I'd want to put a few cases of honey loose in a car, but I think that's what Mr. Niver said the railroads recommended; and when I distinctly asked Capt. Hetherington about it, I think he agreed to the same thing.

NORTHERN ILLINOIS had a good honey year. At a bee-keepers' convention at Freeport, 843 colonies were reported as yielding an average of 60 pounds each, nearly half of it being comb honey. [If you have told us, doctor, I have not seen whether you had a good honey year.—ED.]

HOW QUICKLY bees notice any change in appearance at a time when forage is scarce! Set a hive in a new place, or put an extra story on it, and promptly the robbers will interview it to find if there are weak places.

At the same time, a weakling not half so able to protect itself will be left untouched so long as there is no change in outside appearance.

NOWADAYS the bees are almost as good as a weather-cock. When the wind is from the north, a cloud of bees hovers about the south screen-door of the honey-room all day long. When the wind is from the south, not a bee is seen at the south door; but they're frantically trying to force an entrance at the north door.

J. A. BUCHANAN's plan of handling "only such grades of honey as will not candy, or are very slow to do so," is an excellent one for him; but what are those fellows to do who produce only alfalfa? Somewhere, somehow, the problem of candied honey must be met, and happy is that bee-keeper whose customers are trained to cope with it.

A PREVAILING VICE among preachers is using a story for illustration and leaving the story half finished. I read aloud p. 679, my audience giving best attention; but when I got through they insisted on my telling them whether that man ever got his buckwheat circular. I told them I didn't know, and now there's coldness in the family.

J. A. JOHNSTON, p. 682, is right to a certain degree. It isn't easy to kill out sweet clover in fence-corners and on roadsides. But then, it isn't any easier to kill out other weeds in the same places; and where the ground is plowed, sweet clover is no more troublesome than other weeds. Give sweet clover fits where it deserves it, but please be fair.

VERY SELDOM are the difficulties of grading shown up as well as they are on p. 673, and I doubt whether any set of grading-rules that can be relied on to buy and sell by can ever be formulated without a number of distinct specifications and the use of a good deal of language. [I do not like to give up the idea of getting a satisfactory set of grading-rules, but Mr. Calvert, our honey-man, has come pretty near knocking the notion all out of my head.—ED.]

W. H. EAGERTY, p. 666, advises me to spread section stuff on grass in shade rather than pour water on the grooves. But, friend E., I can't afford to wait till grass grows; and, besides, I wet a whole boxful before taking them out of the box, taking a very few min-



utes, and it would take a long time to spread sections out on the grass and then gather them up. Generally they don't need any wetting—only the few, if any, that have been left over from previous year.

SOME THINGS are to be discussed at the Nebraska State convention. Four of the topics are: "Some things I don't know;" "Some things I know;" "Some things I should like to know," and "Some things every one ought to know" about bee-keeping. [You ought to be there, doctor, to discuss the first of the quartet of subjects.—ED.]

C. H. DIBBERN says the plan spoken of in a former Straw, of putting a cone escape on the mother hive, will surely prevent after-swarms; but in 12 days hardly a bee will be left. The bees eat up all the unsealed brood, either from thirst or alarm at the field-bees not returning. I don't know how long Isaac Lundy leaves the escape on; but would it be necessary for more than eight days? Or how would it do to put it on in six or seven days after the first swarm, and leave it on three or four days?

F. A. GEMMILL, in *Canadian Bee Journal*, says he has had success wintering on solid sealed combs of honey, and quotes McEvoy as indorsing him. Others in same number object to it. [We have made a practice for years of giving solid sealed combs of honey, and putting them right into the brood-nest for winter stores. The fact that our loss for a number of years does not much exceed two per cent is pretty good evidence that the practice is not as harmful as some people think.—ED.]

THAT CORRECTION, p. 669, as to the way the queen makes the piping noise, is all right, and should have been corrected in ABC about ten years ago. But the other correction won't stand. According to the authorities, the bees laboriously masticate the wax with salivary secretion, which agrees with the statement of ABC. The only way they could get acid from the poison-sac would be through the sting. [Yes and no. Well, I don't know. I never saw a queen pipe yet but there was a decidedly tremulous motion to her wings.—ED.]

"WE EXPECT to make our hives next year so that the entrances will be an inch deep, and the full width of the hive.—GLEANINGS, p. 661. Good thing! Could hardly make it better, unless with every hive you give a township right to hoist the hive on four  $\frac{3}{4}$ -inch blocks. But, say! How are you going to enlarge the entrance? If by cutting away part of the front of the hive, I object. All my life I've had hives with entrances cut out of the hive; but since learning the comfort of dovetailers that will sit on one another bee-tight, no more of the old kind for me. [Hives will be left intact, and the entrance will be formed by the construction of the bottom-board, the same as formerly.—ED.]

THE NORTHWESTERN ASSOCIATION, which formerly held such successful conventions at Chicago, is to be revived. Urged by a num-

ber of bee-keepers, and indorsed heartily by the editors of the *American Bee Journal* and *Review*, a call has been issued for a convention, Nov. 10 and 11, at the New Briggs House, Chicago. As that is during the fat-stock show, also the horse show, fares will be low, and a good meeting expected. Say—who's coming from Medina? [I might come with some coaxing, but I can not tell positively at this early date whether I can leave then.—ED.]

"COMB HONEY was never known to sell as low as it is now, and it is the farmers and small bee-keepers that have ruined the price by selling at the stores at any price they were offered."—*Frisbee, Gleanings*, p. 655. "The farmers and small bee-keepers are our best friends," is the teaching attributed to Bro. Abbott, p. 670. All who have had your markets improved by poor honey thrown on the market at low prices, please hold up your hands. [The way you have placed the two ideas over against each other almost puts Bro. Abbott into the shade; but after our friends get through holding up their hands, I wish Bro. Abbott would stand up and explain more fully why the farmer bee-keeper is his friend.—ED.]

M. H. MENDLESON writes that he practices, with entire success, first putting on extracting supers, then sections. "The darker honey is extracted; by that time your hives are boiling over with bees, and are forced to go into the sections. The brood-apartment is generally crowded with brood." [I have been preaching that thing myself, and I am glad to know that I have such a "big gun" as Mendleson to back me up. My object in using extracting-supers to start was not to get rid of dark honey, but to get the bees started in supers. I find that they will go into extracting-supers sooner than into sections; and if they once get into the notion of going above they are more apt to keep on going up, even when the surplus arrangement has been changed to something they do not like quite so well.—ED.]

A DISCUSSION is on in the *American Bee Journal* as to the value of the bee-space. W. C. Gathright thinks where shade is scarce the bee-space protects against the sun. He says, "I once put out some hives facing south, and in almost every one the comb next to the wall of the hive on the west side of the hive melted down. I then turned the hives with the entrance to the east, and had no further trouble. The space between the end-bars and the end of the hives served almost the same purpose as a double-walled hive." [I have watched the discussion myself; and after looking over all the arguments on the other side, I fail to see one good reason why a bee-space should not be used; and on the other hand there are many reasons why it *should* be used. To abandon this bee-space in this day and age would seem to me like going back to the flail to thrash our wheat rather than to use the modern steam thrashing-machines. The most convincing fact to me is that those bee-keepers who use the bee-space produce as much honey per colony right along as the one

or two who think they can not use the bee-space; and, besides, there is a heap more comfort in working with the bees and taking off the honey. Why, the point seems to me to be hardly debatable.—ED.]

"FULL OF PROMISE to apiculture" is the idea of breeding bees for longer tongues, according to Prof. Cook, p. 658. But when he says, "It will take long years, hence the necessity of great patience," I think he throws on more cold water than is warranted. Look at Dr. Murdock's bees with worker-cells, some of them as large as drone-cells, and consider the fact of the great inequality in the present length of bees' tongues. Say, Mr. Editor, just you offer for sale as good glossometers as they have in France, or better ones, and a whole lot of us will go to work at once; and instead of "long years" I believe the question could be pretty fully settled in three to five years; and no one would be quicker or gladder to say he was wrong than Prof. Cook. [Somehow I do not enthuse very much over the possibility of getting bees with longer tongues. A good many attempts have been made at it, but practically nothing has been accomplished. Perhaps if an experiment station could take hold of it something might be done.—ED.]

#### BIOGRAPHY OF DR. JESSE OREN.

Another Banker Bee-keeper.

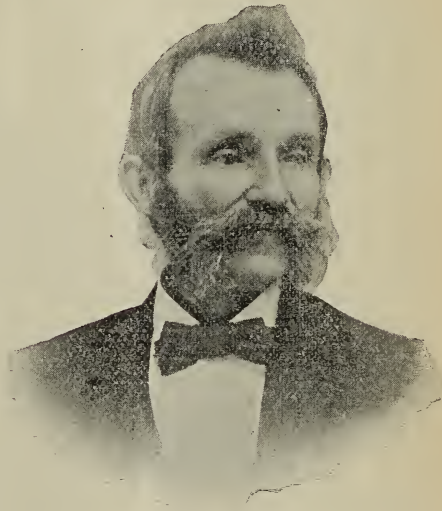
BY O. O. POPPLETON.

The late Adam Grimm will long be remembered as the "Banker Bee-keeper." It is not generally known that we have another man in our ranks, still alive, who divides honors with Mr. Grimm of having graduated from bee-keeping into banking, but has, I think, a much more interesting and unique personal history.

Dr. Jesse Oren was born Sept. 22, 1824, in York Co., Pa., which locality had been the home of several generations of his ancestors on both sides, some of whom suffered severely during the Revolutionary and early Indian wars.\* It would be very interesting to record some of their adventures, but lack of space prevents.

\* All his ancestors on both sides were born and reared in York Co., Pa., and owned farms adjoining each other. These farms were near the Susquehanna River—on the south side of the river, opposite Middletown. Just below Middletown are the rapids in the river, and it is considered very dangerous to attempt a passage by any ordinary boat. Middletown is situated at the junction of Sweet Arrow Creek with the river. Jacob Keller had gone across the river, and was attacked and pursued to the mouth of this creek. Ice was thick in both river and creek, and just grinding along prior to closing up for the winter. It seemed to be only a choice as to the manner of dying. Jacob Keller chose death by ice and water rather than to be captured. He rushed in among the ice, succeeding after a time in getting on top of a large cake of it, and went over the falls safely, and landed on an island about three miles below the falls. On this uninhabited island of about five acres of ground he remained nearly three days before the river closed and he was able to cross to the shore on the ice. The island has ever since been called "Keller's Island."

Dr. Oren's early life on his father's rocky Pennsylvania farm laid the sure foundation for his subsequent life of industry, frugality, etc., necessary for the success of his later life. Deciding that he must have a better education than could be had on the farm, he, when 16 years of age, bound himself out to a harness-maker, with the distinct agreement that he was to have a certain amount of schooling; but the agreement not being lived up to, he went first to Lancaster, O., and then to the Plainfield Academy, where the principal took him as scholar, knowing he was dollarless. From here he went to Johnstown, Pa., where he taught a school during the winter of 1842. In the spring he started for Oberlin College; but by chance he was stopped at Richmond, O., where a new college had just been started. Here he remained three years in alternate



DR. JESSE OREN.

study and teaching. Some of his experiences during this time were interesting and very characteristic, but space forbids giving them.† Hard study and work had broken down his

† He remained in Richmond, O., three years, all the time at study. At the end of five months Dr. Lorimer gave him a certificate of character, and sent him to Judge McCullough, who lived at the mouth of Yellow Creek, about three miles from Wellsville, O. Here he obtained a school at good wages, but soon learned that William McCullough, son of the judge (and at the present time superintendent of a railroad, with headquarters at Wellsville, O.), and John and William Hammond (now and since, and during the civil war, John made his figure as an eminent physician) were to commence the study of algebra and geometry. As Mr. Oren had not studied geometry at all, he felt embarrassed, but nevertheless assigned them a lesson, and then went home to study it himself. As his school was but ten miles from Richmond, where it was well known he was unbooked in geometry, and as he felt the situation was a bad one, he determined to fortify himself by always hearing the lesson of the boys without having the book in his hands. In five months the boys passed through six books of Legendre without a miss or a fault. This will be news to Dr. John Hammond should he see this in print.



health, and he was sent home to Pennsylvania under sentence of death from consumption. Fortunately he fell under the care of a very able physician, who treated him for nervous disorder caused by overwork, instead of for consumption, resulting in a cure in a few months.

As a patient he became interested in the study of medicine, and adopted it as a life profession. For the next few years he was engaged in teaching, in obtaining a collegiate and medical education, and in extensive hospital work, finally being graduated as "M. D." at the Penn Medical University, of Philadelphia.

In 1854 he was one of a limited number of young American surgeons who entered the Russian medical service during the Crimean War. For the first few months he served in a large hospital at Baksisaria, some 12 miles north of Sebastopol; afterward in hospital No. 18 at Cherson, until the end of the war. This removal to Cherson was a promotion with much increased pay and privileges, and was by direct order of the Czar himself. Soon after Dr. Oren went on duty he and his superior, a German surgeon, had a controversy on some point of practice, resulting in a bet, and a victory for Dr. Oren. The idea of a young American doctor worsting a veteran German surgeon was too good to keep, and it reached the ears of the Czar, who ordered him given a present of 25 roubles and the above promotion. At the end of his two-years' service in Russia he returned to Philadelphia with \$5000 in cash, and within ten days started for Iowa, where he first settled in what is now North Liberty; and in 1858 removed to Laporte City, Blackhawk Co., his present home. Here he practiced his profession, gradually becoming interested in farming, bee-keeping, fine-stock raising, and banking, in all of which he has been peculiarly successful.

About a dozen years ago he concluded to try the South, and, as a result, has spent his winters ever since at Daytona, Fla., becoming interested in the town financially. On account of ill health Dr. Oren has, within the last four or five years, retired from all active business except such as is necessary in looking after his financial interests in the bank and elsewhere. When I visited him at his home about 15 years ago he was living on his 1200-acre farm, fully stocked with Clydesdale horses and shorthorn cattle, his specialties, and an apiary of about 300 colonies. The farm and stock were cared for by hired labor; but the apiary work was all done by himself, wife, and two daughters.

He first became interested in bees in 1858, starting with six colonies which cost him \$108. In 1860 he bought from Mr. Mahan the first Italian queen that ever crossed the Mississippi River, for \$22.50. In 1861 his apiary numbered 150 colonies, and has varied from 100 to nearly 300 from then until he retired from active work a short time ago.

His specialty was comb honey, and his success in both honey production and wintering was phenomenal, excelling in both these

respects any other bee-keeper I was personally acquainted with in Iowa. Many of his methods, both in bee-keeping and stock-raising, were original, and differed widely from any I have seen practiced by any one else, and they were peculiarly successful. His bees earned him much of the money invested in other lines, and in this respect he divides honors with Adam Grimm, and not second honors either.

As a friend I have found him to be such as few men have the power and disposition to be. He in his daily life fully lives up to his ideal. He once said to me in words, "What is the use of a man living in this world if he can't be helping somebody?" His success in this line has been equal to his business success.

Pioneers of improved American bee culture yet alive who antedate Dr. Oren's commencement of the business can probably be counted on the fingers of one hand; and I doubt whether any of them have had as unique, interesting, and successful all-round personal history as he has.

Dr. Oren has been president of the Iowa State Bee-keepers' Society.

Stuart, Fla., Aug. 10.

#### HOUSE-APIARY AT NOTRE DAME, IND.

Wintering in a Warm Room; some Interesting Observations.

BY JOHN CHRYSOSTOM.

One of the house-apiaries on the grounds of the University of Notre Dame is a frame building, in length about 60 feet, in width about 9, in height about 10 from the floor to the cone of the roof. It is built of matched lumber throughout, being so tightly jointed that mice and such small animals can not get into it. A small platform on the floor, running the length of the building, is about 3 feet wide and 3 inches high, sloping to the front about an inch, so that the moisture which may collect at any time in the hive will readily run out. On this platform are small frames about 2½ inches apart, inserted in the wall, the exact size of the porticos of the hives, against which the portico of the hive fits tightly, forming another portico about 8 inches high, 12 inches wide, and 11 inches deep, thus making a secure place for the bees to sleep warm at night, especially when there is a large quantity of brood and young bees in the hive, which would make it very uncomfortable for the field bees.

All these openings and hives are on one side — the southeast side of the building — as are also the windows, which are swung on hinges as a matter of convenience. The porticos have tight-fitting slides with ventilators, and may be closed and opened at will. This is very convenient on cold bright windy days in spring, or when bees are robbing, or when looking through a hive in early spring or late in the fall, when the slide and all the windows can be closed, in which case there is no trouble from robber bees.



But, how about the noise, and walking on the floor so near the hive? Bees become accustomed to it, and do not mind it.

I never saw a house-apiary, and know not how they are generally built, or what advantages others may find in them; but for me I find it most convenient and satisfactory. I would not keep bees if I had to winter them in cellars and caves. The hives in this house are only about  $2\frac{1}{2}$  inches apart, and it is very easy to pack them in chaff or straw if it is ever necessary. My opinion is this, founded on experience: That it would be better to have the house facing east, with plenty of windows on the east and west sides; also have a large window in the south end, the north and south ends being flanked with good windbreaks.

sun till noon, and on bright days in spring the top of the hive becomes very warm, even on cold days. Besides this source of heat, there is a coil of steam-heating pipes running along the wall under the window, and the temperature of my room is seldom as low as 50 deg., either night or day. In the afternoon it is up to 75 degrees. The bees get their fresh air from under the window-sash. The hive is so warm and comfortable, especially when the north wind blows, that the bees take exercise in the hive, which oftentimes has been a great source of pleasure to me on winter days, watching them through the glass, as the side of the hive next to my writing-table is glass.

Oftentimes in early spring I have seen the bees fly from less comfortable hives when not



HOUSE-APIARY ON THE GROUNDS OF THE UNIVERSITY, AT NOTRE DAME, IND.

The advantages of this arrangement are that, on windy days, the bees would find a calm atmosphere as soon as they would drop down to the hives, and in early spring the sun shining through the windows and on the roof would raise the temperature in the building, and consequently in the hives, which I think would have a tendency to induce early brood-raising.

But, would not this be an inducement to the bees to fly out on cold bright days? I believe not, when their quarters are comfortable; at least, this has been my experience. I have kept a sixteen-frame colony on the window-sill in my room for the past three years. The window is situated in the southeast angle of the building, affording light and heat from the

a bee was to be seen from this particular one. As for funerals and house-cleaning in the spring, this hive is almost exempt. Perhaps not over 200 dead bees could be found in and about this hive the entire winter and spring.

I have seen them work about 6000 flights an hour on first honey or pollen. At night they appear to enjoy the lamplight, which is sometimes very close to their window. But, the noise? Well, they are aroused by the ringing of a large hand-bell every morning at five o'clock, and every hour till nine in the evening, besides vocal and instrumental music three times a day, when a class of fifteen or eighteen young men join in a chorus, which makes quite a racket. Nevertheless, these little creatures continue from day to day their



daily work as though they were in the tree-tops in some far-off forest.

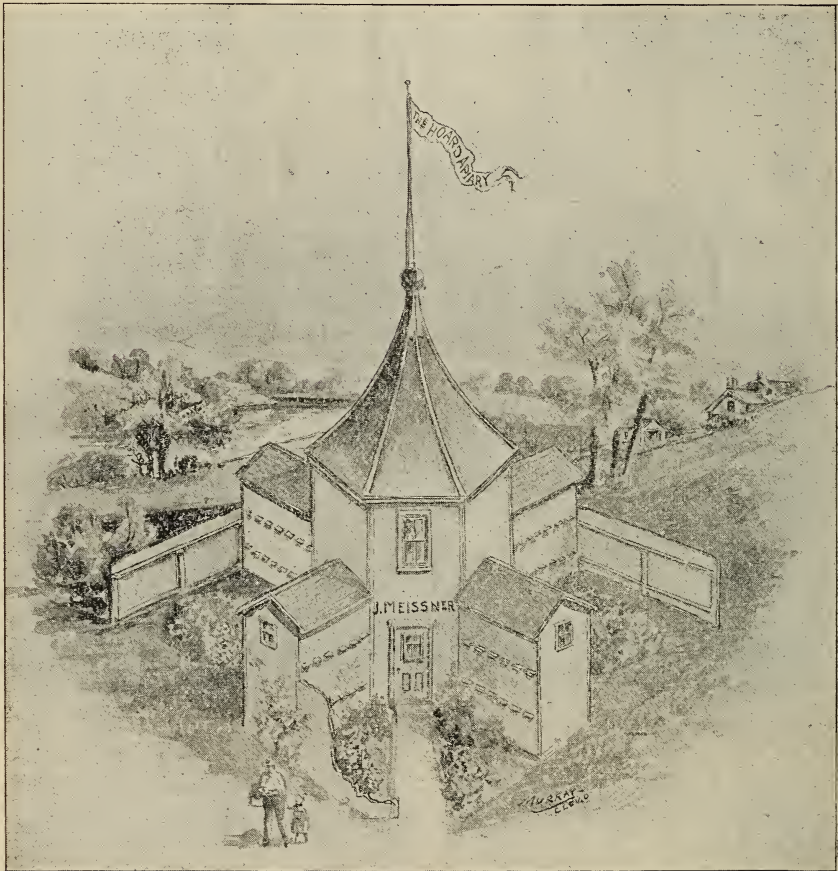
[I would somewhat question the wisdom of having too much glass for the purpose of letting the direct rays of the sun shine directly into the house-apiary building. I should fear that, on cold days, when the sun did not shine, the building might be cold; for glass does not begin to afford the protection that some non-conducting substance like wood does. Perhaps the low temperature of one day without sun might be followed by a calm day with plenty of sun. Then the inside of the building would be very comfortably warm, if not hot, and that would possibly make a difference of fifty degrees in temperature. Mr.

the warm air and to the noises and all other unusual conditions. We have known of other instances of colonies being kept in a living-room, having an entrance connected with outdoors; but, so far as I can remember, these colonies did not fare very well. Perhaps there are some among our readers who have conducted similar experiments who will let us know about it.—ED.]

#### THE "A B C BOOK" HOUSE-APIARY IMPROVED.

BY JACOB MEISSNER.

I noticed in GLEANINGS that you are going to build a house-apiary to keep thieves out. I



MEISSNER'S IMPROVED HOUSE-APIARY.

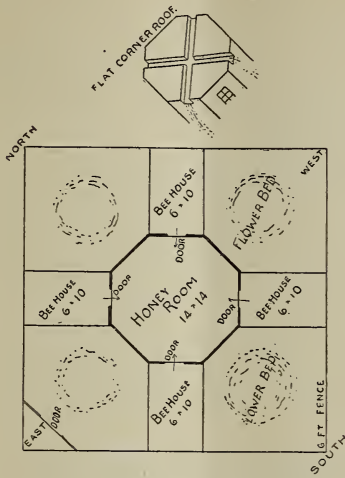
Salisbury and a few others who are using house-apiaries are, I think, wintering quite successfully without any windows save small glass lights that are closed up by shades.

Your experiment with a colony of bees in a living-room is quite interesting. One would think the warm temperature would excite them too much, and cause them to fly; but very likely they have become accustomed to

send you a sketch of mine. This house does not have to be built at one time. Indeed, I have not finished mine yet. The four small houses, or wings, can be moved anywhere. The central part is of eight pieces—four high ones, and four to fit the top of the roofs of the small houses. The whole structure is bolted together. The flat roof shown in the diagram is best for a movable house. To get into this



building, thieves must go through three locks. The whole building holds 96 colonies. Sheenwater, N. Y., Aug. 9, 1897.



GROUND PLAN.

[From an architectural point of view your house-apiary is very pretty; but from a pocketbook point of view I am afraid it would be out of the reach of the majority of bee-keepers. The present price of honey renders it absolutely necessary, if the bees are to pay all expenses and give a profit besides, that a house-apiary should be built as economically as possible. Mr. F. A. Salisbury has a building about 12 x 60, gable roof, which will hold as many colonies as yours, and which probably cost less than a fourth as much. Still, there may be some located in the cities who are not so much after the profit as they are for the pleasure of bee-keeping. To such a one the house-apiary above will commend itself.—Ed.]

### BEE-KEEPING IN BANANA LAND.

Some Interesting Facts About the Flora.

BY H. G. BURNET.

There is no tract of land in the world, of the same size, that I know of, that has as diversified a climate and soil as this island of Jamaica. This diversity is very pronounced, so that, in a journey of a few miles, one can pass from arid plains to where there is a rainfall of sufficient amount to keep vegetation in luxuriant growth the year through. These conditions are brought about by the peculiar topography of the island, in combination with the northeast trade-winds. The range of high mountains through the center of the island causes most of the rain to fall on the north and central portions, while on the south side there are districts where the rainfall does not exceed ten or twenty inches, and on the mountain-tops and north side it is from 80 to 150 inches a year.

On the dry Liguanea plains on the south

sides there is a very interesting honey flora, the most noted being a variety of acacia, locally known as "cashaw," that blooms twice a year—in May, and again in August and September, and that grows luxuriantly all over the dry plains. The honey from this source is thick and white, and of very fine flavor, much like white-clover honey. Then there is the lignum vitae, logwood, and quite a long list of trees, plants, and vines that yield more or less honey; and, when seasons are favorable, very large yields are obtained—so large, in fact, that it is almost impossible to overstock the range, and large apiaries pay well.

In the dry districts the flows are very distinct, and great skill is needed to keep bees strong at the proper time to catch the full benefit of the yield; for often for weeks bees will get nothing; then the cashaw or logwood blooms suddenly open, and fairly drips with nectar; and the careless bee-keeper will lose nearly all of it while the bees are raising a force strong enough to gather the abundant harvest. So it is often the case that he goes to work and extracts too closely, and his bees starve or abscond, or "the moth" plays havoc, and "bee-keeping doesn't pay." But there are some wide-awake apiarists who have the best modern appliances, and are quietly increasing the number of colonies, and starting out-apiaries, and who will surely reap a well-deserved harvest. In the district about Spanish Town there is complaint that the hundreds of acres being cleared up and planted to bananas—under irrigation—is reducing the flows very materially; but there are large areas still untouched. Cocoanut palms also yield honey, as do nearly all of the palm family.

Leaving the plains, and getting up into the hills, we find a more varied flora; for the rainfall is greater, and, with decent care, bees will never need feeding, as they often do on the dry plains, for there are nectar-yielding plants in bloom all the year round. Logwood, which is found sparingly on the dry plains, here grows with great luxuriance, and is found in nearly all the pastures on the great cattle-ranches—here called "pens"—which abound throughout the island.

About Christmas, bees get more or less honey from a convolvulus-like bloom called "Christmas pop," that stimulates brood-rearing, which is of great value, as it puts the bees in good shape, if properly managed, for the harvest from logwood in January and February, which lasts from four to eight weeks. Oranges abound in many parts of the island, and, where plentiful, give considerable honey, following closely after the logwood.

The list of nectar-yielding plants in the hills is quite a large one, including many large trees as well as small weeds and vines. A good many swarms have escaped to the rocks and many caves that are found throughout the hill country. With the facilities of good roads—none better anywhere—and convenient railway transportation, it is a wonder some of the apiarists on the plains have not moved their bees into the hill country after

the cashaw flow has stopped. J. S. Morales, the enterprising secretary of the Jamaica Apicultural Society of Spanish Town, not only handles Root's goods, but rides a bicycle to his out-apiary, and is much in request by a number of beginners in various parts of the island. Friend Morales finds a wheel invaluable in his business, as does the writer; for with the magnificent roads everywhere through the island "it's just fun" to wheel through the lovely and varied tropical scenery.

I again invite A. I. R. to visit this island next winter. He will find many things that will interest him as much as any thing he has seen on any of his travels—immense fields of bananas grown under irrigation; great waterfalls, wonderful medicinal springs, large sugar-plantations, truck-growing under irrigation, great caves, etc., as well as a wealth of tropical vegetation that will be a revelation to him. He can bring his wheel, and ride everywhere, and he will find that he has many friends here as everywhere.

Linstead, Jamaica, Aug. 30.

[Thanks. Will try to send him down one of these winters when it is cold and bleak here, and lovely with you.—ED.]

#### SMOKER FUEL.

Some New and Valuable Kinks in Handling Bees.

BY N. E. BOOMHOWER.

About every apiarist has his own whims and ideas; and among them are some who would rather use a thing of their own originating than to use one they knew was better, but decline simply because some one else got it up, and say it is "no good."

I will give a few points that perhaps will do some one some good if he will try it. One of them is, *fuel for the smoker*. We use old phosphate-sacks that have been laid out in the rain, and washed out, or burlap of the same nature, which can be had in almost any quantities at the junk-shops for one-fourth cent a pound. This fuel has been used by a good many, but perhaps not in the same shape we use it. We take a phosphate-sack and roll it up lengthwise as tight as we can handily with the hands; then we take common cotton twine and tie around the rolls about five inches apart, or about the right length to fit in the smoker; then chop up the rolls between the strings with an ax, and so have a very handy piece of fuel that will just fit into the smoker. One bundle will last two or three hours, and make a much nicer smoke than any wood I ever used.

We take sacks and fill them with the bundles, and send one to each apiary, and that will last through the season. The advantage of this fuel is that there are no sparks; and those who have chaff hives will know that this is one good point. Only a short time ago I burned up four chaff hives on account of using wood for fuel. Your smoker is always cool, easily lighted, and I have known a smoker to stay lighted three hours without

being touched. In lighting the smoker, take the burnt fuel that was used the last time; and by touching it with a lighted match it will burn like charcoal, thereby saving the time of cutting shavings. The cost is about five cents per hundred colonies per season, and about fifteen minutes' work to prepare it.

W. L. Coggs shall, I think, was the first to use fuel in this shape, and you could get him to use no other.

Another useful point is in putting a hook on the smoker—one stamped out of band iron, about  $\frac{7}{8}$  inch wide and 3 inches long, with one end made sharp, and bent like a fish-hook, so it can be screwed on about the center part of the back of the bellows, and about two inches from the top, where it does not interfere with the hand. This will be found very handy, as, instead of groping around and bending over, or reaching to find a level place where the smoker will stand, you can hang it on the edge of the hive, and be out of your way, and save a good deal of time and annoyance.

Another point we just caught on this season is in driving the bees down in the supers, either in extracting or comb-honey supers, where bee-escapes are not used. This is done by taking hold of one corner of the oilcloth and pulling it loose, just so the opposite corner hangs; and, by blowing smoke from the smoker by the side of the cloth, and flapping the oilcloth up and down quite rapidly, you will be surprised to see how quickly the little fellows will leave and go downstairs. It seems to draw just the amount of smoke required, and it scatters it evenly over the frames, and forces it down in between the combs farther than a smoker will do it, and not so much, and does not get the bees excited. With a little practice a person can nearly clean the supers of bees; and where you extract you hardly need to brush the combs.

West Groton, N. Y.

[Mr. N. E. Boomhower is a son of Frank Boomhower, of Gallupville, N. Y. As I saw Mr. N. E., or Novice, as he is familiarly called, working in one of Mr. Coggs shall's apiaries, I can testify to the correctness of every point he makes. It is indeed true that this old gunny-sack smoker-fuel is cheap and lasting, and it gives a good volume of smoke without sparks. I think Mr. C. told me he bought for this purpose old phosphate-sacks. The smell of the phosphate would do no harm, but, on the contrary, would have a more favorable effect on the bees. I do not suppose it would pay ordinarily to buy new burlap for the purpose of making smoker fuel, and yet it might.]

The idea of flapping smoke into extracting-supers for the purpose of expelling bees by means of the enamel cloth or quilt is a valuable one. The principle seems to be in causing a partial vacuum in the super. A continuous stream of smoke is poured over the frames. The flapping of the enamel cloth, as explained, causes a suction, driving the smoke further into the super than it can be done with the smoker itself, strange to say. You have probably noticed this, that, while in bed,



if the bed-clothes are held fast at one end, and raised up suddenly, it will cause a suction. In the case of the hive the smoke seems to be driven into, or rather sucked into, the super, not by the *downward* flap, but by the sudden uplift of the cloth.

Well, how about the results? I saw young Boomhower drive bees out of super after super; and when he took the combs out to shake or brush, in many cases there was hardly a bee on the combs, so thoroughly did it do its work. I shall have more to say about this when I come to tell about my visit at Mr. Coggsall's; but in the meantime, brethren, try it and see how it works. If you use a flat cover, and no enamel cloths, try the ordinary robber-cloth that Dr. Miller recommended, but have it wet. As soon as the cover is removed, lay this on the frames, then try the flap act, and notice what it will do. Now try to smoke the bees down in the ordinary way with the smoker, in another hive, and I think you will notice the difference as I did at Mr. Coggsall's. Of course, you know Mr. C. does not use a bee-escape. His reasons for not using one I will explain at another time. —ED.]

#### DOES PURE HONEY CONTAIN ANY CANE SUGAR?

If Not, Can Even a Small Per Cent of it be Detected by Analysis? Chemical Terms.

[Some little time ago I stated editorially that I was under the impression that pure honey was liable to contain a small per cent of cane sugar, and that, when the chemist detected a small amount of it in honey, it should not be construed as evidence that the honey had been adulterated. On page 493, Mr. Selser, of Philadelphia, a chemist, criticised the statement, adding that my mistake doubtless occurred from the fact that I had confounded chemical and commercial terms. "Pure honey," said he, "does not contain any cane sugar, commercially speaking; . . . but there is a very large percentage of sucrose, and sucrose is a chemical term for cane sugar."

Prof. Cook, on page 624, in referring to this article of Mr. Selser's, said he thought it contained several errors, and hoped it might be submitted to Dr. Wiley for review. Following up the matter I wrote to the doctor, sending him a marked copy of the article in question, and the following is his reply:—ED.]

U. S. DEPARTMENT OF AGRICULTURE,  
DIVISION OF CHEMISTRY,

WASHINGTON, D. C., Aug. 30, 1897.

*The A. I. Root Co., Medina, Ohio:*

Gentlemen:—I take pleasure in complying with your request of the 21st instant, in respect to the statements in the article on page 493 of GLEANINGS.

The subject under discussion is hardly a matter for argument, because it is simply a question of the use of terms. The expression "cane sugar" is used constantly by chemists as a synonym for sucrose, although I do not believe that sucrose is used synonymously with cane sugar by the commercial world. In commerce, cane sugar is simply sugar made from sugar cane, as beet sugar is sugar made from beets, and maple sugar, sugar made from the maple. Chemically these sugars are all identical, and are spoken of indiscriminately by chemists as cane sugar or sucrose.

The sugars which are present in a genuine honey are almost exclusively cane sugar, or

sucrose, and invert sugar, which is made by the inversion of cane sugar. It is probably true that the original sugar of nectar is almost exclusively cane sugar, which is inverted either by the acid juices of the plant itself or by the digestive organism of the bee. In ordinary honey, this inversion is almost completed, and very little cane sugar or sucrose remains, almost the whole of the sugar being invert sugar that is composed of about equal portions of dextrose and levulose.

It does not appear to me that the criticism of your correspondent, Mr. Selser, is well founded; but the character of his statements does not quite corroborate his claim of being a graduate of a special course in analytical chemistry. It is not quite in harmony with a scientific spirit to state that "there is not one per cent of cane or common sugar in pure honey." In this statement I defy contradiction.

I do not claim to be a honey specialist, and it is so long since I graduated in chemistry that it has ceased to be a matter of gratification to me to remember the date. I have, however, never been so certain of any position that I may have taken in scientific matters as to boldly proclaim that I defied contradiction. In point of fact, the sugars which are present in honey are exactly the same as the sugars of commerce; viz., sucrose, or cane sugar; dextrose, or right-hand sugar; and levulose, or left-hand sugar. It would require a great many statements from Mr. Selser to alter this fact, but still it may be easily contradicted.

Respectfully,

H. W. WILEY,  
Chief of Division.

[After receiving the foregoing I sent it to Mr. Selser for further review, and he replies as follows:—ED.]

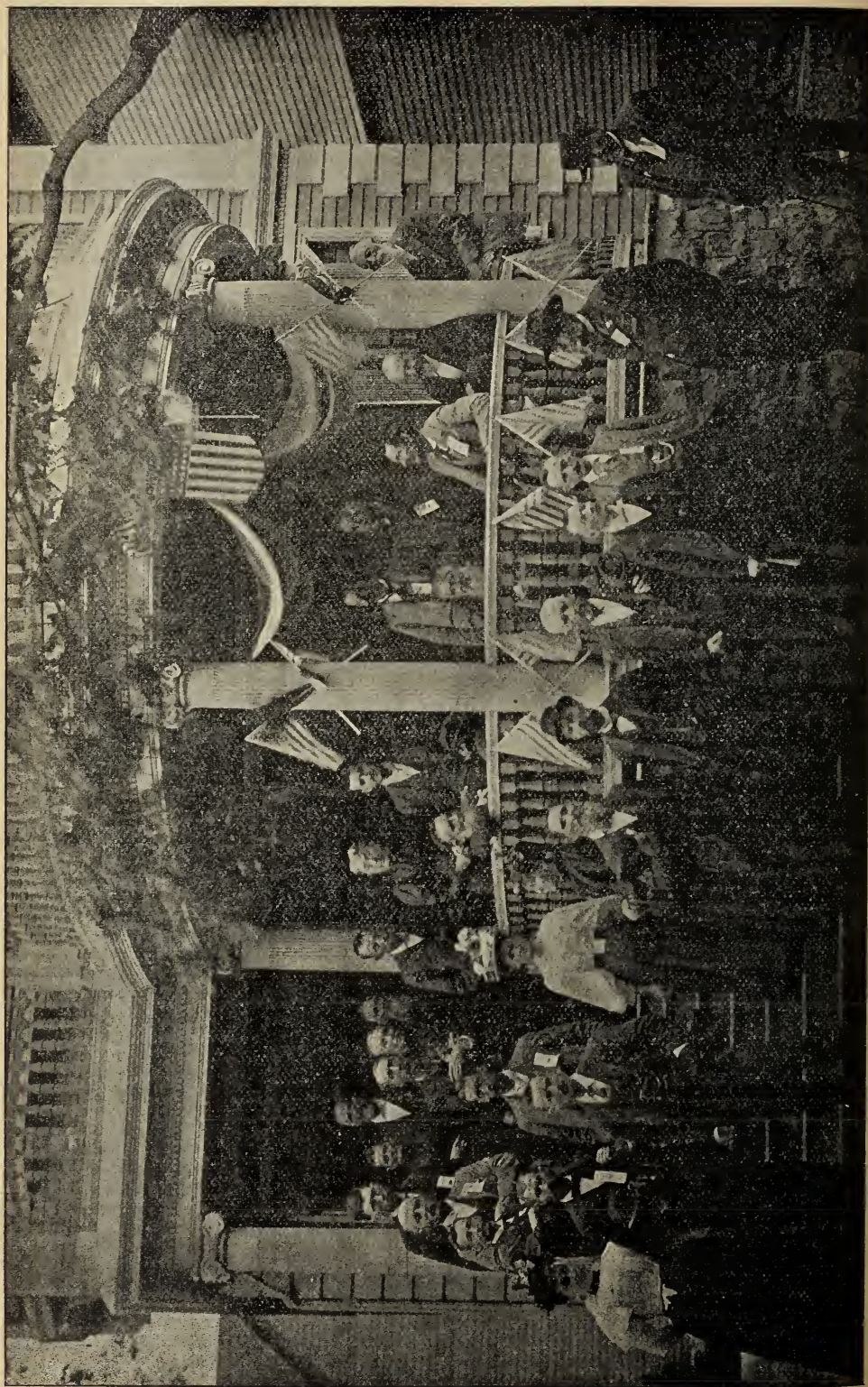
The article you first published, the basis of which was taken from "Prof. Wiley's Book on Honey Adulterations," as well as the present article from Prof. Wiley, is not a matter for discussion between the two classes—scientist and laity—and as such is very misleading. I do not contradict a word of Prof. Wiley's paper; from a scientific standpoint it is *absolutely correct*, and I desire to state that my words defying contradiction were addressed to the reader of GLEANINGS—the honey-producer. I desired to make it very emphatic, that, if he placed one to five per cent of commercial sugar in the honey, it could be detected by analysis; and your statement that "five per cent of commercial sugar in honey did not prove that it was adulterated" I felt was an error that might result in terrible consequences. In proof of what I say, I make the following offer to the readers of GLEANINGS:

Mail me five samples, say 3 ounces each, of honey; let four of them be pure, and one adulterated with five per cent of commercial sugar; number each one. If I do not detect the one that is adulterated I will pay to the sender \$10.00; if I do detect the five per cent of commercial sugar, he is to pay me \$5.00, or the price of my analysis, \$1.00 a sample.

Now, scientifically, turn to the "Government Book on Adulteration of Honey," 1892, page 791, the top of page showing sample No.



SOME OF THE PROMINENT BIG-KEPPERS WHO ATTENDED THE BUFFALO CONVENTION-SEE EDITORIAL.





41 of pure honey to contain 8 per cent of sucrose and 65 per cent of reducing sugar. This sample was proven to be positively pure. Now, Prof. Wiley uses the same word for sucrose as cane sugar, and also says the words are not used synonymously in the commercial world. Here is where the line must be drawn, and I repeat the professor's words: "It is simply a question of terms."

Now practically. In my visit to a large honey-producer I mentioned the fact that my State, Pennsylvania, had a law that, if the smallest per cent of commercial sugar was detected in honey, there was a fine of \$50.00 for every store selling it. He said that, in the fall, he fed a lot of granulated sugar. Most of it had been consumed by the bees, and but a very small per cent remained in the combs. When fruit-bloom commenced he thought it so small that he paid no attention to it, and extracted it with the other frames in the first extracting. This man is a good man, and I am sure he meant to do no harm, as he had seen the statement that all pure honey contained a small per cent of cane sugar.

Had any party from Pennsylvania bought his honey and put it in bottles, marking it "Pure," and sold it to twenty stores, it would have cost the bottler \$1000, and ruined him for life. Will not Prof. Wiley pardon my strong words in the light of these facts?

Philadelphia, Pa. W. A. SELSER.

[I am glad to note that there is no real disagreement between Mr. Selser and Dr. Wiley; and I am glad to note, also, that Mr. S. is perfectly ready to prove his faith by his works; so, then, let the samples go in to him. We will gladly give place to the results in these columns. Send him not only sugared samples but glucosed samples; and when he sends you the report, mail a copy of it to us, together with a statement of just how the honey was originally "doctored."—ED.]

### THE DEEP-CELL FOUNDATION.

Conditions Under Which Bees Build Heavier Comb.

BY F. A. SNELL.

I have eagerly read every thing that has appeared in GLEANINGS on the above subject, inasmuch as I think it a very important one. If it proves what is hoped, it will have an important bearing on bee-keeping in the future, so it seems to me. The importance of partially drawn combs, especially in the central sections of each super put on at the opening of the honey harvest, is a conceded fact with most bee-keepers. The drawn foundation will, if in no other way objectionable, come into general use in the sections. I think shallower cells may be preferred by many after the first super for each colony at the opening of the harvest. The reports given of trials made near the close of the honey-flow or during a light flow, of heavy combs, or those having more wax than some natural combs have, could hardly have been expected to be otherwise. Every close-observing bee-keeper has

noticed, no doubt, that at different times the thickness of combs varies much, depending wholly, so far as I have observed for thirty years, upon the honey-flow at the time the comb is built. You mention this fact; and you will remember that I in a former article took considerable space in calling the attention of apiarists to the matter of thickness of combs, stating when the conditions and honey-flow were right for the building of very light combs, and the reverse.

My experience with the deep-cell foundation is very limited. I received a sample last spring; and when the bees were well at storing surplus I put it in a section and placed it next the glass side of the super. I watched the bees closely. Work was commenced on it at once, and the cells drawn out and finished. The weight of the comb is all that I could ask for, and this one test impressed me very favorably. Next season I hope to give it quite a thorough trial, and I hope all who have done so this season may give their experience through our journals. Even if the new foundation be discarded in a few years, the effort will not have been in vain. Much useful knowledge will have been gained. I think it has come to stay, and prove of value to the bee-keeping fraternity.

Milledgeville, Ill.

### DRAWN COMBS AND DRAWN FOUNDATION.

*Friend Root:*—Referring to my article on page 560, August 1, regarding drawn combs, I was not as clear as I should have been; I therefore explain that the drawn combs I used, and which did not give this season as good satisfaction as full sheets of foundation, were leveled down by breaking the cells, in all cases where they were over  $\frac{1}{4}$  inch in depth; possibly some were left deeper than that. What I said would not reflect on the new drawn foundation, which, I believe, will do all that is claimed for it, and the finished product will be first class in every respect. This I hope to demonstrate next year by actual experience. But unfinished sections at the close of the season are like many other things. We shall have them whether we like them or not.

H. LATHROP.

Browntown, Wis., Aug. 14.

### BEEES ACCEPTED IT AT ONCE.

I consider your drawn foundation a marvel of workmanship. Bees accepted it at once. I have not yet sampled the honey, but I have no doubt it will be as tender as natural comb, if not superior to it.

C. S. HARRIS.

Holly Hill, Fla., Aug. 30.

### THE NEW DEEP-CELL FOUNDATION AHEAD.

I have tested the drawn foundation you sent me this summer as follows: I put the pieces, which were in size 2x4, one in each section, which made them half full, and put them together in one corner of the surplus-box. As the bees usually begin to fill the sections in the center of the surplus-box, they accepted your drawn foundation at once, and

extended the comb down to the bottom of the section, and built or stuck it all around, the same as any other foundation. For my part I should prefer the sections only half full of the raised foundation, as I think it is just as good as having them filled, thereby saving expense. The principal feature of it is to get bees started to build; after that, there will be no trouble, and your new process of manufactured comb starts them *sure*. The only difficult part I experience is in fastening them to the section. Bloomdale, O., Sept. 7. M. N. SIMON.

#### THE DEEP-CELL FOUNDATION A SUCCESS IN EVERY WAY.

The 20 combs of drawn foundation were all finished up nicely, and their eating qualities can not be surpassed. This was a very poor season to test it by the side of common foundation, as bees would start on any sheet of wax. Some years we know it is hard to start them, even on the best foundation. I expect to use the drawn foundation another season entirely. J. C. WHEELER.

Plano, Ill.

#### UNFAVORABLE FOR NEW DRAWN FOUNDATION.

The willow-herb was a failure in this locality, so I could not give the new drawn foundation a test from that source. A few sections containing common foundation have been filled and finished from fall flowers, but none containing new drawn foundation have been finished. The third day after putting on the supers the common foundation was drawn out farther than the new drawn foundation clear down to the base. R. E. ASHCRAFT.

Woodville, Mich., Sept. 3.

[It is the exact truth that we want. If there are more reports of a like character, let them come in.—Ed.]

#### OCCURRING THOUGHTS.

BY J. W. SOUTHWOOD.

*Mr. Editor:*—On page 527 you say, "It does little if any good to put anything on a bee-sting." Try ma-le-na. It not only allays the pain if applied soon, but by its pleasant smell destroys the odor of the sting and thus prevents the bees from becoming angered. It is found in drugstores generally, and costs 10 cts. per box. It is a good salve for many purposes. It is manufactured at Warrior's Mark, Pa. [The pain is very brief at most, and my way is to grin and bear it. The pain would be over before I could get the stuff on. To destroy the odor I blow smoke on the wound.—Ed.]

On page 533 of *American Bee Journal*, Mr. A. B. Mellen says he prefers piling up the supers five or six high with a cone escape on top, rather than use a Porter bee-escape, as it saves one handling. I have never practiced that method, but have seen it practiced, and believe I can free the supers with less work and less liability of destroying the capping by the use of the Porter escape. I think it a grand invention.

One difference between *pure* blood and thoroughbred is that pure blood is barely susceptible of improvement, while thoroughbred can be greatly improved. G. M. Doolittle, on pages 500 and 501, points out this fact relative to the black bees as compared with the Italians. While the latter have been, and may yet be, greatly improved, the black or Germans are barely susceptible of improvement.

When from some cause queens are not clipped, many times the queen may be caged as she issues from the hive. Prepare a roomy cage; and if the hive has a full entrance, prepare an entrance-block; and, if near at hand, pass to the hive while the swarm is issuing, and lessen the size of entrance by moving the entrance-block endwise at one side of entrance so the eye can easily see the full width; and as the queen comes out cage her by putting a cage over her. She usually comes out quite reluctantly toward the last, and sometimes comes only to the entrance, and then goes back. In such cases I open the hive and take her out, as she is quite easily found. I frequently take queens of after-swarms in this way.



ITALIANS, VS. BLACKS FOR WINTERING; FEEDING; UNIFORMITY IN HIVES; WIRING FRAMES; METAL-CORNERED FRAMES.

A correspondent sends in a number of questions; and as I do not think it best to take as much space in answering them as I usually do to each question, I have thought best to number them and answer by number.

1. Do you think that Italian bees stand the cold winters we have in 43° north latitude as well as the black or German bees?

*Ans.*—It is said by some that they do not; and I used to believe that what the "some" said was the truth; but that was before I made any careful tests in the matter. Some eighteen or twenty years ago I began to look carefully into the matter of wintering; and during the experience of all of these years since, I have become convinced that there is little if any difference in favor of either along this line. Some winters the blacks seem to do the better; in others, the Italians come out ahead.

2. A neighbor has given me some bees in box hives, because he thinks they have not stores enough to winter on. How can I feed these bees?

*Ans.*—This is very easily done at this time of the year by boring a hole in the top of the hive, if there is none already there, and placing a feeder on top, covering all with a hood, box, half-bushel, or something of the kind. If you do not have a feeder, a suitable-sized tin basin or pan will answer every purpose for such feeding. After having the feed in the pan,



pull up some rather short grass and scatter it over the top of the feed for a float, to keep the bees from drowning, and set up a piece of section in such a way that the bees can climb on it over to the feed. Be sure that all cracks under and about your cover are bee-tight, otherwise you may have a bad time with robbers.

3. Can I not put off feeding till winter just as well?

*Ans.*—No! a thousand times *no!* When will people learn not to put off the feeding of bees till cold weather comes? October 1st to 10th is quite late enough to feed bees; but should it so happen, from sickness or otherwise, that the bees are destitute of food when winter sets in, take the box hives to the cellar, turn them bottom side up, and every day or two sprinkle a few tablespoonfuls of honey over the bees and combs, having the honey a little more than blood-warm. If they are a large colony, or seem to require more, use as much as a half-teacupful each time. In this way bees have been wintered successfully; but the chances are that a loss of feed and bees will be the result.

4. Would it do to leave them till winter, and then set them in a warm room under netting, to feed?

*Ans.*—No, I should not like to try that. From my experience in the past, such a procedure would cause them to become uneasy and to go to breeding, thus consuming large quantities of food, which would in all probability cause diarrhea, resulting in death. There is a chance for such occurring where fed in the cellar, but not as much as in the warm room.

5. Could these bees be wintered in a warm room?

*Ans.*—The chance for this would be very slight indeed, although such has been tried with success in a few instances, I believe. The cellar is a much better place, and requires much less labor and care, hence I see no reason for desiring to try such risky experiments. [See page 697.—ED.]

6. I am about to make some new hives. Is there any advantage in both upper and lower story being just alike, so they can be used together or separately? If so, how would you arrange the entrance?

*Ans.*—There are many advantages in having all hives in use of the same size, and several in having both stories just alike. In making, you can get along with much less bother; you can use the upper story for the same purpose you do the lower, at any time you so desire, which will be quite often; and one, two, three, or more will fit together like clock-work in tiering up, without any outside shell to cover them. By making the entrance in the bottom-board where it should always be, this part need not affect the hive at all. If made right, you can enlarge or contract the same by simply moving the hive a little backward and forward on the bottom-board, thus saving any entrance-blocks.

7. Would you advise me to buy wired frames by the hundred, filled with foundation?

*Ans.*—That depends upon conditions. If you are to work your apiary for extracted

honey it might be the better plan; and if you work it for comb honey, and have not the time to look after the combs properly when being built; or if your time is very valuable, it may be the better way. But with the average bee-keeper I think it will pay fully as well, especially where the sections are filled with thin foundation, to use only starters of comb or comb foundation in the brood-frames, say from  $\frac{3}{4}$  of an inch to an inch wide, as it will to fill the frames full of the same, to say nothing about the saving of money and time. It is the opinion of several of the best bee-keepers of to-day, that as much or more comb honey can be secured by allowing the bees to build their combs in the brood-frames, using starters as above, than by any other mode of procedure. Certainly comb honey of the most fancy make can be produced in this way, and the difference in selling price between this and that built by a colony having old black combs below, where much of the old wax gets into the capping of the section honey, is an item worth looking after, but one which has no bearing on the foundation question, however.

8. A neighbor of mine is using metal-cornered frames. Are they enough better than all-wood frames to pay the difference in price and the extra trouble of making?

*Ans.*—I tried the metal-cornered frames several years ago, and did not like them well enough to use any more of them. The trouble I found with them was that, in carrying the hive from one place to another, they would move about so, even after the combs were built, that the frames would require respacing after every time moving, else a lot of bad combs was the result. Then in handling, the corners would get bent unless care was used, so they would not hang true in the hive; and sometimes the fingers would get cut. I wonder if the Roots use them now. [A I. R. used to like them (perhaps he does now), but there are none in use in our apiary now; in fact, we do not even offer them for sale. They were displaced in our apiary by self-spacing frames, which we prefer.—ED.]



#### PREDICTING THE HONEY-CROP PREMATURELY.

*Mr. Editor:*—I've come to the conclusion that I do not want to report the honey crop. It is usually much spotted; that is, there may be a good flow of honey in this locality, and only a few miles distant a failure. If I report a good crop, it lowers the price. If I report a failure, only a short distance away there may be a good crop. Those who have honey to sell, seeing my report of a failure, ship in here, injuring the market for those who live near.

When there is a good flow for a day or two,

some producers write to the periodicals, "Tremendous honey-flow!" and before it reaches its destination, bees may not be making a living. This year a man came for sections, saying that he never saw honey coming so fast. We ordered them for him, and they remained here one month, and I doubt if he ever opened them.

Some newspapers report a big yield of corn, which is far from the truth. It didn't ear well, neither did tomatoes set. The best crop in this locality was blackberries. It is reported that a man dug his potatoes, dropping them into a jug, and after working all day it was not full.

MRS. L. HARRISON.

Peoria, Ill.

[See editorial on this subject, page 670.—Ed.]

#### DISCOURAGING FOR FLORIDA.

You may announce that the present season has given us not one pound of surplus honey in this "neck of the woods." This is the most signal failure we have ever known all along Florida's East Coast. As I have given you some fine records from here I will not shrink from recording this surprising failure. Except for the killing of the mangrove in '95, I do not see how we could have had a season like the present. By next season we shall get honey from that source again.

Hawks Park, Fla., Aug. 27. W. S. HART.

#### THE BEAR AND THE BEES; THE FATE OF THE BEAR.

We never had any bee-hives kicked over by horses or sheep, but we had two kicked over last night by a bear, and the honey and brood eaten out of one. She was scared away three times, and came back the fourth time, all in five hours. I twice drove her away with two Winchester; the last time I put a hole through her jugular. This was my first chance at her. I was away when she came first, and my wife shot at her. Mrs. Bear was a dandy, and weighed 400 lbs. I shall take her hide to the tannery to-day, and will make a rug of it. She was killed at 11 p. m. After bleeding ten minutes she got up and came at me as I went to her with a light.

F. T. HALL.

Barron, Wis., Sept. 3.

#### A "SENSITIVE" HONEY-PLANT.

Bees are now working lively on smartweed, corn-top, goldenrod, and other plants, and another very pretty plant with yellow flowers that is quite sensitive to the touch. I do not know the name of it, but will inclose a sample. The leaves are always facing in the direction of the sun. Some have clusters of the flowers for ornaments in their dooryard.

Fairbury, Neb., Aug. 15. O. C. BURCH.

[The plant sent belongs to the family *Leguminosæ*, or pulse. This particular one is *Caesalpinia*, but a different species from *Poinciana*. The plant is nearly related to the well-known Mollie Heath honey-plant. It resembles the true sensitive plant of the florists, and it is closely related to the beautiful acacia of Cali-

fornia and Florida. These plants are so exceedingly handsome I would advise you to save the seed and offer it to bee-keepers. If it is hardy in Nebraska it will probably make a beautiful dooryard plant throughout the whole North. I should be glad of a small packet of seeds myself.—A. I. R.]

#### LIMITING THE QUEEN'S LAYING CAPACITY BY THE USE OF PERFORATED ZINC.

I notice in a late issue of your journal that you object to caging or taking out queens during a honey-flow, "as the bees sulk too much." I have not tried it, only as a colony happened to be queenless, or was made so in the operations of queen-rearing. I think you are correct, but it has occurred to me that that difficulty might be overcome by caging the queen on one comb in a cage made of perforated zinc, so that the bees could have full access to her and she could lay to a limited extent on the one comb only, while the rest of the brood-nest is being emptied of brood, and being refilled with surplus for extracting.

Estero, Fla., Sept. 3.

J. S. SARGENT.

[The plan you speak of has been tried, and a few years ago it was thought it might be a big thing; but we scarcely hear of it now. One trouble was that, when the queen failed to raise the usual amount of brood, through no fault of her own, the bees proceeded to supersede her. In short, this contracting the queen's room induces a condition of discontent on the part of the bees, and of course they fail to do their best work.—Ed.]

#### THE DANZY HIVE.

I have put one swarm of Italians into a Danzy hive. They have completely filled the brood-nest with absolutely straight combs, with only starters, and finished the super of 32 sections with the nicest white honey I have ever had, and all in exactly two weeks from the day I swarmed them. I like the mechanism of the Danzy. There was not a burr-comb to be seen when I took off the sections above noted, this week.

I suspect all will have beautiful clover comb this year; but those tall sections of thin beautiful clover honey are certainly enough to bring out a hearty interjection.

Indianapolis, Ind.

T. C. POTTER.

#### WHITE CLOVER; GROWING AND GATHERING THE SEED, ETC.

Never seeing any thing in your publication about gathering white-clover seed, we make inquiry as to what method is used for cultivating and gathering it.

JOHN COLEMAN.

Altoona, Pa., Aug. 23.

[I shall have to confess that I have never heard of cultivating white clover. Of course, we sell the seed of the white Dutch clover, which is pretty much the same thing, and this, I believe, is generally sown the same as alsike or red clover; and my impression is the seed is harvested in much the same way, as it has a good deal shorter blossoms, and nearer the ground than the alsike. There may be,



however, some modification in the way of getting the seed crop. As there are several among our readers who have grown and sold us the seed of white Dutch clover, will they kindly answer the above?—A. I. R.]

#### BEES HANGING OUT.

In GLEANINGS for July 15 I see on page 531 the question is asked, "What is the cause of bees hanging out?" I think the bees become damp for want of a little upward ventilation; and I find by putting a wedge under the cover at the rear end so as to give the bees a little air-current during the extremely hot weather, and taking out the wedge when the extreme heat is over, and letting the rear end of the cover down again, the bees work right along, and there is very little loafing. I use a wedge  $\frac{1}{4}$  inch thick. WM. H. EAGERTY.

Cuba, Kan., Aug. 6.

[Friend E., I think you are right about the bees; in fact, substantially the same treatment has been recommended in GLEANINGS, and found to be successful, if I am correct.—A. I. R.]

#### SWEET CLOVER.

I send you an old number of *Clover Leaf*. It contains an article on sweet clover, which struck me as being a very able one.

Sweet clover has gained a foothold along the Cuyahoga River in Independence, next township to Bedford west. We notice good results from an apiary that father has located there. I have saved and fed the fine hay, and the horses eat it with a relish. I believe it to be an excellent forage-plant.

Bedford, O., Sept. 15. EDSOHN HAINS.

[The article from *Clover Leaf* is certainly very full and instructive. We make a brief extract from it as follows:—ED.]

General S. D. Lee, President of the Mississippi Agricultural and Mechanical College, in a letter to this office, says: "What was the poorest part of my plantation six years ago is now the richest from the use of melilotus, and the hay is, in my judgment, the superior of red clover for stock."

#### SHEEP IN AN APIARY.

In the last number of GLEANINGS I read what you have to say about letting sheep run in the apiary to keep the grass down. But there is a surprise in store for you if you ever try the thing in your yard. The sheep will strip your Concord's of the last leaf first before they go at the grass, and they will climb on top of the hives in order to get at the last leaf.

CARL VOLLMER.

Absarokee, Mont., Aug. 14.

[Very likely sheep wouldn't do in our yard, on account of the grapevines. There are no grapevines in Burt's yard.—ED.]

#### SUCCESS OF THE PETTIT SYSTEM.

The pleasure I find in keeping up to the last improvement caused me to try Mr. Pettit's comb-honey system. To have a fair trial I took 15 powerful colonies, which were divided into 3 parts. No. 1 had its hives raised with wedges  $\frac{7}{8}$  to 0; No. 2 received only a  $\frac{3}{8}$  block,

and No. 3 nothing, resting on the bottom-board. In each case I found all the outside surface of the two rows of sections next to the supers nicely finished; no difference could be noticed. Due attention has also been paid to the dividers. A part has received 5 cleats, another 3, and the third 2. These last turned out to be just as good as the first ones.

In conclusion, until better improvement is at hand I shall do away with wedges, and use dividers with only 2 cleats, one at each end.

FRANCOIS BENOIT.

Notre Dame des Neiges, Can.

#### FLIGHT OF BEES IN WINDY LOCATIONS.

I should be glad if you could get some practical bee-keepers, who have had experience in windy portions of the Pacific coast, to answer the following question, and let me know through GLEANINGS or otherwise: How far will bees fly in windy portions of the Pacific coast, and do well gathering surplus honey? Will they gather as much honey if they have to fly from two to four miles as they would if they had to fly only half of that distance?

Thebe, Cal., July 26. NICHOLAS SPARGO.

[Will some one on the windy coast please answer?—ED.]

#### SMALLER CROP IN YORK STATE.

My honey crop, as nearly as I can judge, will be about one-third less than last season; bees have not made much if any surplus since the first week in July. I give it as my opinion that this part of the State (owing to basswood not yielding honey) will be very much shorter than last season. I am selling in my home market at the same price as last year; viz., 10 to 13 cts. for comb per lb.

E. J. HAIGHT.

Rock Valley, N. Y., Aug. 5.

#### FAIR CROP IN IOWA.

A fair crop (not extra) of No. 1 white-clover honey. Basswood was nearly a total failure. Bees are gathering honey enough to keep up brood-rearing at present. Whether or not we are to have a fall flow of honey we are not advised, as we have not heard from our honey-prophet lately.

O. B. BARROWS.

Marshalltown, Ia., Aug. 4.

#### GOOD HONEY CROP IN UTAH.

A good honey crop was raised in this section, but no sales to date. I am doing very well selling to the local market in small packages. Reading those articles in GLEANINGS, on making home markets, has greatly interested and assisted me in this line. A. B. THOMAS.

Payson, Utah, Sept. 6.

#### RECIPE FOR HONEY APPLE-BUTTER.

One gallon good cooking apples; one quart honey; one quart honey vinegar; one heaping teaspoonful ground cinnamon. Cook several hours, stirring often to prevent burning. If the vinegar is very strong, use part water.

Loveland, Colo.

Mrs. R. C. AIKIN.

## "THE HONEY-BEE."

Dear Mr. Editor:—Some time since I presented a friend of mine with some honey. In response I received the inclosed verses. I take the liberty and pleasure of sending them to you for publication. I sincerely trust it will be your decision to publish them.

North Street, Mich. JAS. T. REID.

[With the greatest of pleasure. The lines are good—very good.—Ed.]

## THE HONEY-BEE.

By Rev. Volney M. Simons.

The bee! She's in and out,  
And flits and flies about;  
She darts on rapid wings,  
And buzzes, bores, and sings  
Among the beds of flowers  
And in the beauteous bowers,  
In soft and sunny nooks,  
And by the purling brooks,  
In many a quiet spot  
By us o'erlooked, forgot—  
The honey-bee is there  
And here and everywhere,  
A making honey.

Unlike ourselves, unschooled,  
The bee is never fooled.  
She sucks the blooming rose,  
And well her instinct knows  
She'll get, by her own skill,  
Of the sweet rose her fill.  
The fragrant lily-beds,  
A thousand thousand heads,  
Their richest, rarest store  
Yield freely to her bore.  
In stills, the plans her own,  
By alchemy unknown,  
With mingled suns and dews,  
Untaught of us, she brews  
Delicious honey.

Who taught the bee, you ask,  
The skill for her queer task?  
Who gave her the high art  
To fashion every part,  
And, forming cell on cell,  
Build all so strong and well?  
Who told her how to sip  
The nectar with her lip?  
In garden and in field  
To find the sweets they yield?  
Who gave her the strange power,  
The alchemistic dower?  
Who gave the pretty bee  
Her power of chemistry?  
Who showed her how to take  
A thousand sweets, and make  
Delicious honey?

A moment, let us see  
This busy beauteous bee.  
Behold her and her comb,  
A self-constructed home,  
Each single rounded cell  
Is builded strong and well,  
While all the solid walls  
Rival old St. Paul's.  
Unschooled, the little bee  
Excels yourself and me;  
Without mistake or flaw,  
By instinct's certain law  
She builds, and, building, shows  
How much she really knows,  
In hives and barns and attics,  
Of simple mathematics.  
With never fuss nor fret,  
She works for what we get—  
Delicious honey.

## THE NEED OF GOOD QUEENS IN JAMAICA.

If any country requires better queens than another, it is Jamaica. Why? Well, our honey-flow is never as heavy as with you in the States, but it is continuous for, say, seven months, and all that time the queen is hard at work keeping up egg-laying. A queen is old here at twelve months of age.

JAMAICA BEE-SUPPLY Co.

Mandeville, Jamaica, Aug. 23.



J. H. B., Utah.—Young larvæ having their heads wrong end to in the cells is very unusual. We would advise you to change queens.

W. W., Mass.—The insect that you send us is what is known as the "robber-fly," *Asilus Missouriensis*. It is common in the South, but is very rarely seen in the North. While it preys upon bees to some extent it does no great damage. It also destroys thousands of noxious insects, and it is possible that the good it does more than overbalances the harm that it does to bee-keepers.

J. M., Wis.—There are two ways in which you can winter your bees—out of doors and indoors. If you winter outside, the spaces in your double-walled hives should be packed with sawdust, planer-shavings, or some porous material. In the absence of anything else, dry leaves packed pretty solid will do nicely. For directions in regard to wintering, see page 34 of our catalog, and also the subject of "Wintering," in our A B C of Bee Culture.

C. S., N. Y.—In regard to the microscope, and slides showing bees, I am now a little rusty on the subject, not having done any thing at it for some twelve or fifteen years; but I think there is no question but that, for the money, you can get altogether the best microscope from the Bausch & Lomb Optical Co., Rochester, N. Y. Their microscopes are well made, and the lenses are fine. Send for their catalog. With regard to slides showing bees, I do not know to whom to refer you. I have a very choice collection of my own that I made, but which I should not like to part with, as I sometimes wish to show them to bee-keeping friends who call here. Regarding the price of microscopes, I do not believe you can get a really good one for less than \$15 or \$20. The more money you pay, the better the instrument.

C. K., Texas.—The amount of sulphuric acid to be used in refining wax varies with the quality of the wax. If it is dark and dirty, use about a pint to two or three pails of water. If it is fairly clean, and needs only to be of a lemon yellow, a very little acid will answer. A tablespoonful to a pail of water might be sufficient. You may have to "cut and try" until you get about the right proportion. It is desirable to use as little acid as possible to secure the result; then the melting tank or barrel should be allowed to stand, covered with carpets or old cloths for a few hours before the wax is drawn off. If it is a barrel it would be more practicable, probably, to dip it off from the top. Before dipping, the wax should be cool enough to form quite a scum on top. When it is allowed to stand thus, the impurities go with the sulphuric acid, and settle out of the way by reason of their greater specific gravity.





SOMEBODY has been calling Dr. Miller a liar. I do not believe he believes he is one, neither does any one else unless it is the fellow who gave him that mild appellation. Take it all in all, I believe I would rather have a man call me a harsh name than my friends all know doesn't fit than to fling mild insinuations at me that border pretty closely on the truth.

A PAPER by the Hon. R. L. Taylor, of Lapeer, Mich., formerly experimenter for the Michigan State Apiary, on the relation of bees to horticulture, was read by the president, Mr. Taylor being absent. In this paper he touched upon the subject of spraying and the pollenization of fruit-blossoms by bees. It was one of the ablest and best papers that was ever read on that subject; and if no one has any objections I propose having it put in the form of a leaflet for general distribution among farmers and fruit-growers. I hope to present it to our readers a little later on.

A FEW days ago we had a pleasant visit from the editor of the *Pacific Bee Journal*, Mr. B. S. K. Bennett. Having been through a hard rush of business publishing and editing the bee-journal, and conducting the supply-business, at Los Angeles, Cal., he found the need of a rest, and accordingly had been taking a sojourn of two months in the East, among friends and relatives. As previously announced, he attended the Buffalo convention, and went from there on eastward, and finally in his circle landed here at the Home of the Honey-bees. He was just on his way back to the Pacific coast, and left Medina for a bee-line to his home. Mr. Bennett is only 24 years old, but has considerable business sagacity and push. As editor of a bee-journal and as a short editorial paragrapher he has shown no mean ability. GLEANINGS wishes him success.

#### BEE-KEEPERS' PICNICS AND GOOD COOKS.

A BEE-KEEPERS' picnic is quite a common social affair in York State. I have attended several of them myself. The last issue of the *Amer. Bee Jour.* refers to one held recently at Freeville, and which I attended. It seems that there are several counties in York State that have county bee-keepers' associations that meet at least once a year. It is the custom to call in some outsider to address the association, after which there is a general discussion and question-box work. This is either followed or preceded by a first-class picnic dinner. I said "first-class," and I meant it, for those York State women do know how to cook. I remember that the president of the Seneca Co. Bee-keepers' Association, Mr. Fred S. Emens, at the last meeting at Elm Beech

Park, was asked what he thought of the Seneca Co. cooks. I couldn't see the "point," notwithstanding every one laughed. Noticing my blank silence, some one whispered in my ear that the president was a single man, and that there were also some "good-looking single cooks" there that day. My eyes involuntarily wandered from good-looking Fred to the aforesaid prepossessing cooks, and I said to myself, "Yes, why not —?"

#### BEEES LOOSE IN THE POSTOFFICE IN NEW YORK CITY.

ALONG the fore part of last month appeared an item in the *World*, of New York, to the effect that some bees had caused a panic in the New York postoffice. It seems some ignoramus of a bee-keeper had put up a lot of bees in a flimsy package that leaked, and the bees got loose in the mail-sack. When the clerks in the New York office (probably the most important one in the United States) attempted to open the sack, there was a "panic;" and the *World* for Sept. 8 gives an account of it as follows:

The clerks who sort Uncle Sam's mail in the big granite Federal Building had the liveliest sort of a time for an hour or two last Saturday night.

Along about midnight, when the work is the heaviest, and van-load after van-load of mail-matter is dumped in the postoffice, to be sorted by the army of clerks, a porter flopped a big leather pouch on a "form," as the sorting-tables are called, and proceeded to open it.

As he slipped the leather strap through the staples and pulled open the mouth of the pouch he heard a sound he had never noticed before to proceed from a mail-bag. It was like the humming of the summer breeze through the tree-tops.

"That sounds like mosquitoes," said the porter, who lives in Hackensack in the winter season; but he backed away from the pouch and called a fellow-porter's attention to it.

The two made a cautious investigation. The sound had ceased, however, and one of the porters ran his hand inside the pouch and felt around for about two seconds. Then he let out a yell that alarmed the roomful of clerks, and danced about the sorting-table shaking his hand violently.

"Take 'em off!" he yelled, and he tried to brush something from his hand.

"What's the matter, Bill?" asked his friend.

"Bees, that's what! There's a million of 'em in that bag."

The superintendent was called, and a council of war was held. It was decided that, bees or no bees, that bag of mail had to be sorted, and volunteers were called for.

After considerable hanging back, two brave fellows grabbed the pouch and emptied its contents on the "form."

As the letters and packages poured out on the table a swarm of healthy "workers," as the apiarists call them, arose in a cloud and sent the clerks scurrying to cover.

Several felt the result of contact with the business ends of the honey-makers, and it was some time before the volunteers screwed up courage enough to return to their work. The mail-matter had to be separated, and that quickly, for already much time had been lost.

It is evident that the facetious reporter drew largely on his imagination, and that the actual occurrence was not nearly as bad as reported; but it was bad enough. It was just such an occurrence as this that resulted in Uncle Sam's prohibiting bees from the mails a few years ago. Any bee-keeper who is careless enough to put up a package of queen and bees so that it breaks open in the mail-bag should receive a good scoring.

## BEE-KEEPING IN HAWAII.

WE have had a pleasant call from Mr. Wm. Thompson, of Honolulu, H. I. Mr. T., although connected with the "Kamehameha" school, and instructor in the department of sciences, is the owner and manager of some 500 colonies of bees, all in one apiary. Two things I could not understand. 1. How he could manage to teach every day, and run so large an apiary; 2. How it was possible for him to keep so many colonies in one apiary. As to the first, he is obliged to employ help; and, moreover, the heaviest part of the bee-work comes when school work is the lightest. As to the second, he told me that he presumed he had too many, but that many more colonies could be supported on a given location in Hawaii than in many portions of the United States. Bee-keeping was confined to a narrow belt of land along the coast, and a company had been formed to buy up all the colonies in that region, the ostensible purpose being to "make a corner" on the honey market there, and at the same time secure all available desirable bee-pasturage, for it seems that that is quite limited. The area which the company is trying to secure control of will probably support only about 3000 colonies. They have not pulled Mr. Thompson into the "combine" yet, and it is unlikely that they will succeed in doing so.

Our friend says that bees can be kept inland, or up in the mountains, but the honey is dark and of poor quality. That which is produced in the area along the line of the coast is of very fine quality, if I can judge from the taste of a mere sample which he gave me.

We have sent him queens a number of times by mail, and I believe that in all cases they have gone through alive; but imagine my surprise when he said that the bees, even from these queens, grow to be so large in the salubrious climate of the Hawaiian Islands that they can not go through ordinary perforated zinc. I had asked him if they used perforated zinc, and he said he had tried it, but had had to give it up, as the bees could not get through it when filled with honey; and then when I suggested that the bees from *our* queens surely could, he shook his head.

The honey that is produced in Hawaii is all extracted, and is sold in the London markets. The beeswax, also quite an item, instead of being a bright yellow as it is in this country, is white—so white, indeed, that its purity has been suspected in London; but when it is remembered that this wax comes from the solar wax-extractor, and that said extractors are under a tropical sun, it is not to be much wondered at that the product should be thoroughly bleached.

Mr. Thompson gave me an interesting account of the situation in Hawaii, and of the struggles of the little republic under our previous and present administrations; of the wisdom and magnanimity displayed by President Dole, under trying circumstances. Of course, friend Thompson was heartily in favor of annexation, and he hoped that our American Congress would make the little republic a part of us.

## THE BUFFALO-CONVENTION PICTURE.

AFTER one of the sessions, somewhere about four o'clock, the bee-keepers assembled in the convention room at Buffalo were requested to adjourn to a raised platform in front of the building, and near one of the triumphal arches through which the G. A. R. veterans marched. The bee-keepers were requested to take their seats upon the reviewing-stand, while the artist took two shots; but as it was a little late he made a little too much allowance for the light, and "overtimed" the pictures so that they were too flat or too something; but on the morning of the same day, I think, the same artist took a view of a large number of the bee-keepers who attended the convention that was good. This picture was taken in front of the lodging-house where many of us were stopping; and the result in half-tone is reproduced on another page. This view, while it shows only a small portion of the convention members, takes in a list of many of the most prominent bee-keepers of the country. I regret that I am not able to give you the name of each one of the faces there shown, and I can remember only a few of the more prominent ones.

Beginning at the extreme left, the bald-headed gentleman with full-face, white tie, and side whiskers, light coat, arms folded, apparently leaning on the steps railing, is Mr. Wm. Couse, a gentleman who has long been secretary of the Ontario Bee-keepers' Association. He is one of the leading bee-keepers of Canada.

The gentleman just in front of him with arms also folded is Mr. S. A. Niver, or, as he modestly styles himself, "Morton's brother-in-law." Mr. N. has had much experience in selling honey and other articles directly to consumers. Possessed with a good stock of humor and with a "tongue balanced in the middle," he can sell honey like hot cakes.

The next face that I recognize, and just at the left of Mr. Couse, and a little higher up on the steps, with his hands folded in front of him, is Mr. E. T. Abbott, editor of the *Busy Bee*, a sprightly publication published at St. Joseph, Mo. Mr. Abbott, as I have before stated, is employed by his State to lecture on rural subjects during the winter. I never heard one of these lectures, but I have seen some of those who have, and they pronounce them as full of life and interest. His hen story, it is said, fairly captivates his audiences.

Mr. A. is always prominent at conventions, is an eloquent and earnest speaker. Very often independent in his views he says just what he thinks. If the "other fellow" does not like his style—well, he does not lose any sleep over it. While he may not be given to honey-eyed words he has a kindly heart and sympathetic nature.

At Mr. Abbott's left, and just in front of one of the pillars, is Mr. David Coggsball, who, I believe, owns an apiary of some 500 or 600 colonies of bees. Like his brother, W. L., he lives in a beautiful residence—one that would compare favorably with some of the dwellings on the fashionable streets of our cities. Both of the Coggsballs are bright keen



business farmers—at least I judge them to be such from the general thrift and appearance of every thing upon their premises. There were no broken-down gates, tumble-down fences, no poor excuses of barns, or houses sadly in need of paint.

At Mr. Coggs's left is Mrs. Mason, wife of Dr. A. B. Mason, the enterprising secretary of the U. S. B. K. U. The doctor is one of those whole-souled, happy, good-natured men whom it is a pleasure to know; and while his face beams all over with smiles, he is quite liable to say something that will hit *you*, if you do not look out. If you do not like it—well, he is too fat and happy, he says, to worry very much about it. Mrs. Mason is one of those quiet, pleasant women, whom it is a pleasure to meet. She very often goes with her husband to bee-conventions, and the doctor says he takes her along to keep *him* straight.

In front of Mrs. Mason, with his arm resting upon the railing, and sitting down, is the kindly face of Dr. Miller. He is another strong convention man. Without him, a convention to me always has something lacking. The doctor has a happy faculty of throwing in jokes and short pithy speeches that help very much to enliven a convention.

Just back of Dr. Miller, and next to Mrs. Mason, is Geo. W. York, president of the U. S. B. K. U., and editor of the *American Bee Journal*. He was again honored with the office, and will probably be our presiding officer at the next meeting at Cincinnati or Omaha, or wherever it may be held. Mr. York is a little chap; but what he lacks in stature is made up in energy and hard work. If he loves his friends he loves them with all his heart. He never believes in doing any thing half way.

At Mr. York's left, and in the background, a little to the right of the middle pillar, is Mr. E. A. Wander, of Hartford, Ct. I made his acquaintance at the Buffalo convention, and had the pleasure of his company at Niagara Falls. He is royal good company.

In front of Mr. Wander is Mr. O. O. Poppleton, a bee-keeper of national reputation, of wide experience in the North and the South—one who, while he does not write very much for the journals, yet, when he does write, has something to say. He is a very careful, thoughtful bee-keeper. So careful and conservative is he that he has been engaged to make some experiments for us for a year or so back, in testing various articles that we were about to put on the market, but which we could not do in our northern climate.

Next to Mr. Wander, and back of Mr. Poppleton, almost too much in the shade to be seen distinctly, appears Mr. P. H. Elwood, of Starkville, N. Y. He is a large man of fine appearance; nor does this exterior belie his real heart. With the possible exception of Mr. W. L. Coggs, just in front of him, and a little to his left, he owns and operates the largest number of colonies of any bee-keeper represented in this view. In general characteristics he and Mr. Poppleton are a good deal alike—careful, conservative. He is too busy to write much for the journals, and

too modest to say much in conventions. But when he does express himself he gives us something to think about.

Just in front of him, with his elbow resting on the railing, is Mr. W. L. Coggs. In our previous issue I referred to the rapid way in which he and his helpers handle bees; and as I expect to write up more in detail in future in regard to Mr. C.'s methods, I will not say more about him at this time.

The next face that I recognize on the porch is that of Mr. Miles Morton, of Groton, N. Y., who is the "brother-in-law" of Mr. Niver. Mr. Morton has been for years the local supply-dealer in Tompkins Co. During my recent visit to New York State I called at his place. Like the Coggses he has a beautiful home, and in the rear a nicely equipped shop for making hives, sections, etc. Mr. Morton must be another Dr. Tinker, for it is easy to see he is a born mechanic. Every thing turned out from his shop is beautifully smooth and accurate. He is a man of original ideas, and in his quiet way he has been using and advocating certain devices which, in my humble judgment, will in the near future come to the front. But more of this at another time.

Getting off from the porch, and just in front of the pillar on the right, with his hands behind him and his hat on, is the Hon. E. Whitcomb, vice-president of the U. S. B. K. U. He had come all the way from Friend, Neb. For years he has been one of the active bee-keepers of his State; and the handle to his name shows that he has dabbled more or less in politics. I took a walk with him through the streets of Lincoln, Neb., and found that he is known familiarly pretty well over the city. He introduced several of us to Senator Thurston, of the U. S. Senate; and I could not help noting on all occasions that one and all seemed to feel that Mr. Whitcomb was a man of influence.

Just in front of Mr. Whitcomb, and a little to the right, with his back against the railing, and his head between two flags, stands R. F. Holtermann, editor of the *Canadian Bee Journal*, and apicultural experimenter of the Ontario Agricultural College. Mr. Holtermann, although a young man, has been honored with the office of president of the North American Bee-keepers' Association, and has also been its secretary. For one and possibly two years he has been president of the O. B. K. A., and for years has been recognized as one of the leading bee-keepers of Canada. He is active in conventions, and writes to a considerable extent for the agricultural press.

Just in front of Mr. Holtermann, and a little to his right, stands Mr. Frank Benton. This gentleman has probably traveled more miles after big and little bees, passed through more real hardships, and has probably seen more of the apicultural world in this and other lands, than any other living man. It was he who accompanied D. A. Jones, and acted as interpreter for that gentleman in a trip through Europe and to the Holy Land after eastern bees, the result of which trip was the introduction of Syrian and Cyprian bees into

this country; and it was Mr. Benton who went through the jungles of India after *Apis dorsata*, studied them in their native homes, and sent back reports at various times in regard to these and other species of bees. He is probably more intimately acquainted with the different bees of the world than any other man living. At the present time he is connected with the Agricultural Department of general government, in the Division of Entomology. Mr. Benton is exceptionally well educated, reading and speaking fluently several different languages. He is a fine conversationalist and a direct and forcible speaker; and were it not for some unfortunate things that have happened at recent conventions (whether he was right or wrong I need not discuss) he would be one of the most popular men in our ranks.

There, I believe I have given all the names than I can remember. There are some faces among those above that seem familiar to me, but at this time and place I can not locate them for I am not good at remembering names, especially if they are piled upon at the rate of four or five a minute.

This picture does not by any means represent all the leading bee-keepers who attended the convention at Buffalo; but when I come to review in my own mind the lives of a few of our leading lights, I feel proud of our industry and of the men who represent it; and in my travels among bee-keepers I am more and more convinced of the fact that they are superior men and women. A large number are leaders in some of our best professions. No wonder, then, that they are shining lights in the bee-keeping world.

#### ROTTEN BROOD IN THE APIARY; SENDING SPECIMENS TO MEDINA FOR IDENTIFICATION.

THE foul-brood inspector for Ontario, Canada, Mr. Wm. McEvoy, in the *American Bee Journal* for June 17, makes the following good points:

For 17 years I have warned the bee-keepers to keep all dead and putrid matter out of their colonies, so as not to cause foul brood; and while I have been warning and holding up Death's head and the cross-bones, the professional guessers, who were not practical bee-keepers, have been encouraging the wholesale spread of the disease by saying that rotten brood in hives would not cause foul brood. Such teaching as that has caused thousands of bee-keepers to be very careless; and when the disease has broken out in their bee-yards, it was left to run its course to the ruin of their apiaries, and all others in the same localities. It is only the very few among many thousands of bee-keepers who have succeeded in curing their apiaries of foul brood after it got a good start in their bee-yards, and the owners left to themselves to manage the curing.

It is certainly wise to err on the safe side; and while rotten brood may not necessarily be foul brood, nor be capable of developing into that disease, yet it should always be looked upon with suspicion by the bee-keeper, especially if he does not know exactly what the disease is.

I have advised bee-keepers of late to send us doubtful samples for identification. Of course, such pieces of comb should be securely wrapped, preferably in paraffined or waxed paper. If you can't get either of these, get

some stout paper and grease it on both sides. Never think of sending brood wrapped in paper simply, or in a paper box. After wrapping as directed, slip it in a tin box, the comb packed in cotton batting. This latter is to act as an absorbent should there be any dripping.

Two or three samples without the box came to us with the paper soaked through and dripping; but happily the specimens were not foul brood. We are quite willing to help our subscribers all we can; but we do not wish to place our own bees and our own interests in jeopardy.

Each sample of brood is thoroughly inspected, and a report is made in regard to its condition by return mail. It is my practice to take a doubtful sample, go before the big boiler-arches, open up the packet, smell it, tear open the cells with a little sliver of wood, and then toss the whole thing, package and all, into the raging fire. We burn all such specimens, whether they prove to have foul brood or not.

One man was about to destroy his whole apiary, thinking he had foul brood. At my request he sent me a sample, and it proved to be only chilled brood—brood that had died owing to the cool nights prevalent in the latter part of May. I told him the bees were all right, and to let them alone. How much we saved this man the reader can figure out for himself.

I have given similar advice to several others, and am willing to do it again; but our friends must not put *us* in jeopardy by putting up the specimens carelessly.

#### KEEPING HONEY OVER FOR BETTER PRICES.

MR. J. F. MCINTYRE, of Fillmore, Cal., who was present at the Buffalo convention, told us how he stored his honey in large storage-tanks, and held it over for another season. If the market prices did not seem to justify him in disposing of it that year he held it over. The honey-flow in California is very uncertain. A good year is liable to be followed by a poor one. It is the year following, possibly a poor one, when honey is a scarce article, that Mr. McIntyre unloads his crop at paying prices. The white-sage honey is not inclined to candy, and he finds it profitable for him to store it over till prices suit him. He said he could keep honey stored in his large tank some two or three years without candying, and he could afford to wait till the market went up.

Some one, in the course of his talk at the convention, asked him what his honey crop was. Year before last he had one thousand 60-lb. cans of honey. It is well known that California bee-keepers wholesale and retail in square cans holding 60 lbs. On account of the dry climate, barrels and kegs can not be used. Well, those thousand 60-lb. cans, or 60,000 lbs. of honey, was all produced from one apiary. This apiary is located in a valley, and comprises some 500 or 600 colonies. He narrated how the bees would fly six and even seven miles up and down the mountains. Those long flights explain why so many bees can be kept profitably in one apiary.





Our older readers will remember Mr. Fred L. Craycraft, who used to write for the JUVENILE GLEANINGS when we had a "juvenile" issue, fifteen years ago. Well, you may not all know that Fred has grown to be a bee-keeper of no small "dimensions;" in fact, he is at present the owner of an apiary of something like 500 or 600 colonies in the island of Cuba. Well, just before the convention at Buffalo we were agreeably surprised to meet this same person here at the Home of the Honey-bees, and he accompanied us on the way to Buffalo. As he is quite a cyclist he accompanied me on a pleasure-trip to the vicinity of Niagara Falls. I hardly need tell you of the beautiful path for wheelers from Buffalo to the Falls. We, however, branched off from the regular route in order to call at Christian Weckesser's, at Sanborn, N. Y. Friend W. is a seed-grower and market-gardener, and of course I greatly enjoyed looking over his vegetables and fruits. Like myself, however, friend W. finds that, in attempting to grow all kinds of fruits and vegetables, he has a pretty big job on his hands; and when it comes to growing seeds for sale *also*, I tell you one has most of the time too many irons in the fire, especially if he wants to take a little time now and then to get acquainted with his wife and children. Friend W. has the wife and children too, and we had quite a pleasant talk about "our homes" as well as about our vegetables and fruits. Plums were just getting ripe at the time of our visit, and I for one greatly enjoyed sampling varieties I had read about but never saw or tasted before.

I can not tell you of all the new things I saw there; but I want to mention Kendall's Giant sweet corn—a variety as early as, or, if any thing, more so, than the Corey, and at the same time producing good-sized ears free from the smut, that seems to hang about the Corey so persistently. I saw it growing, and examined the ears, as I did also the Corey planted at the same time and on the same ground. I am so well satisfied of its superiority that I expect to offer it for sale next season in place of the old standard Corey.

Our next point was La Salle, near Niagara, where that well-known writer and author on every thing pertaining to gardening, Tuscio Greiner, has his abode. Friend Weckesser kindly volunteered to go with us to La Salle; but it was just about dusk when we reached there, and Mr. Greiner was absent at Buffalo. However, we greatly enjoyed looking over the grounds. No wonder things grow, for the beautiful soil was so filled with stable manure that it made me think of the grounds around Arlington, in the suburbs of Boston. We saw the various things friend Greiner has told us about in his articles in the different agricultural periodicals; the house for curing onions, open at the sides, with broad roof to keep off

the rain; the beautiful onions on their respective trays where they were being cured preparatory to pickling; the great Prizetakers, grown by the new onion-culture process, showing that friend Greiner practices just what he preaches. I also greatly admired the white onion called Garganus. This I saw both here and at friend Weckesser's grounds. It is larger than the Prizetaker, and it seems to me the onions are more uniform and true to type. And, by the way, we talked about the fact that the seed of any vegetable, when it is first introduced, is greatly superior to any that can be bought a few years later. We also saw where friend Greiner had grown onion-plants in his greenhouse, in *coal ashes*, and nothing else. This seems to me a little astonishing. Mr. Weckesser said he saw them at different stages of growth. The onions are of better color and of better growth than when produced in the rich greenhouse soil.

When I spoke about going to a hotel for the night my good friend Weckesser replied:

"Mr. Root, you trust me a little, and don't do any thing about going to a hotel just yet. There is a man who lives here whom I want you to see; in fact, I am expecting something rich when you two get a little acquainted."

On the way to the place mentioned we passed a store, beautifully lighted, as I supposed, by an electric light inside, and another one out in the porch.

"There, what do you think of that light?"

"Why," said I, "it is a very pretty light indeed. Is it some new method of using electricity for illuminating?"

"Mr. Root, it is not electricity at all. Just take a good look at it and we will go on."

We drew up in the darkness in front of a very pretty residence; and when told that Mr. Long was at home he invited us to go in. Before we entered the apartment there was a little hustling around as if something had been carried out of the room, and I soon became aware of a peculiar smell of chemicals that brought vividly to mind my boyhood days. When I asked about it our host admitted they had just carried out some of the chemical apparatus, but suggested that perhaps it would please *me* as well to have it brought back. Then one of the boys brought in a sort of lamp made of tin, surmounted by a gas-jet. This gas-jet gave forth a small blue flame. It looked to me like the flame produced by the oxy-hydrogen blowpipe of forty years ago, especially when said blowpipe was directed against a piece of lime or other refractory substance.

"May I ask what gas it is that is giving this exceedingly brilliant flame?"

"Mr. Root, you say you studied chemistry once. Let me explain it briefly by saying that it is the new acetylene gas. Its chemical composition is expressed by the formula  $C^2H^2$ ,\* as you may know."

"Why," said I, "it is one of the hydrocarbons, like illuminating-gas, only you have

\* Illuminating-gas is, if I am correct, light carbureted hydrogen,  $C^2H^4$ ; thus it contains double the amount of hydrogen found in acetylene gas.

a larger percentage of hydrogen. Is it a new discovery?"

"No. Acetylene gas has been known for years. You probably saw it mentioned briefly in your chemistry forty years ago; but since Niagara has been harnessed, and we have electrical energy in greater volume, and cheaper than the world ever saw it before, some odd things have come to light. About four years ago, while attempting to produce something that was wanted, a quantity of lime and carbon was exposed to this tremendous electric heat; but they did not succeed in producing what they expected, and the product of their experiments was thrown away. When some water was accidentally thrown on to this substance a very curious phenomenon ensued. Here. Examine this piece of stone, will you?"

The mineral that I took in my hands looked like limestone. After I had examined it sufficiently, one of the boys handed Mr. Long a bit of ice perhaps as large as a hickorynut. Another gave him a match, and, after placing the lump of ice on the limestone (as it appeared), a lighted match was held over it. The ice took fire like a piece of resinous pitch, and burned up with wonderful brilliancy. When the ice was all consumed, the fire went out. Next a piece of this new mineral, calcium carbide, was dumped into a tub of water, and quite an ebullition commenced at once. When a lighted match was applied to the surface of the water we had a fountain of flame. This calcium carbide liberates pure acetylene gas just as soon as a drop of water touches it; and the lamp that friend Long has been engaged in perfecting is simply a tin can to hold the new chemical. You just pour some water on the limestone, screw on the top of the lamp containing the burner, and it is ready to light. When you turn off the gas, so that no more can escape, it accumulates and pushes the water up into the reservoir above until no more touches the lime; then the gas ceases to be generated until somebody opens the burner and lets some of it out; so you see it is automatic in its operation. The gas is generated just as fast as it is burned, and no faster.

Permit me to say right here, that, when I was seventeen years old, I was astonishing the people right and left by showing experiments in electricity and chemistry. I used to go around to the schoolhouses, charging ten cents admittance—schoolchildren half price. During the forty years that have passed since that time I have kept track, more or less, of the developments in electricity. No wonder friend Long and I talked far into the night. I am afraid I forgot all about our friends Weckesser and Craycraft and all the rest. They dropped off one by one, and left us talking.

This calcium carbide is now produced in a large factory at Niagara Falls. It is offered for sale in quantities at four cents a pound; and it takes so little of the gas to make a tremendous light that four cents' worth of material will do more lighting than a like amount of money expended in kerosene oil, cheap as it is in many places. Instead of filling your lamp with oil you take out the slacked lime and put in another chunk, something as you

slip a cartridge into a gun, and that is all there is to it. There is nothing greasy or wet or sticky about the apparatus, or will not be when it is perfected. If you wish to know more about acetylene, write to D. N. Long, La Salle, N. Y. I believe a complete lamp at present costs four or five dollars. I expect to have one as soon as they are prepared to offer them to the public.

I told you in our last issue why we abandoned our wheels the next morning. Although I have several times visited Niagara I had not until this time made the trip clear under and through the falls. During my previous visit I believe I did not get *enough* of its wetness and grandeur. Friend Craycraft and I, however, decided to take it all in. We took off every thread of our ordinary clothing, and put on something like bathing-suits; and over these, suits of yellow oilcloth, including a hood that came clear over the head. As I am susceptible to chills, I was a little fearful, when I walked along the slippery walk, of the cold spring water trickling down upon us; but when I got far enough into the water of the great cataract I was surprised to find it comfortably warm, even on a somewhat chilly morning. We first went clear *around* the fall through the spray, witnessing the rainbow that makes a complete circle. They claim this is the only place in the world where one can see a rainbow that goes clear around like a wheel. Outside of this is a second rainbow, and part of the way round you can see a third one. I have many times wished it were possible to go right into and through the falling water; but I did not know before that this had been done so completely. I experienced at first the pleasurable sensation I have so often described, of breathing watery spray. But pretty soon there was more water in proportion to the air than was really agreeable. I began to be afraid I should strangle, and asked the guide and friend Craycraft if they were prepared to carry me out if I fainted from loss of breath. After they had expressed their readiness and *ability* to take me safely through, I ventured onward. Just imagine yourself outdoors in the most pelting rain you ever saw; then suppose the raindrops to be so thick that there is more water than air. It was a sort of spray; but this spray came in such volume that, when the guide told me to look straight down, it seemed to me as if the weight of the water would crush me to the earth, or, rather, to the stout iron bridge on which we were walking. Occasionally the water would sway over to one side so I could look up. No tongue can describe nor pen picture the sight. The water seemed like billows of snow. In fact, it made me think of the roaring and tumbling snowdrifts that I saw through a telescope over Pike's Peak. Yes, I was "right in the swim" of Niagara Falls; and it seemed as if one *might* almost swim in this watery spray. I wondered who it was who was sufficiently daring to undertake to construct the iron bridge right through this boiling mass of water. Did the workmen get accustomed to it? or did they choose some time when the great cataract was asleep, and



forgot to pour down its terrible and *relentless* stream? Panting and gasping I said to the guide, "Do we have to go back the way we came?"

"Oh! bless you, no. We go in one way and come out the other. You have got all through it;" and for the time I was glad. Yes, I paid a dollar for the privilege of going "behind the curtains," and being for a few brief moments right in the midst of the roaring-and seething monster. And it was worth a dollar too. I shall never forget it; but I do not want to go through it again, even if the guide did say, "After you have been through three or four times you can breathe without any trouble at all. One has to get used to it."

Our guide seemed to be quite a sensible, intelligent, and bright fellow, and I felt a good deal of respect for him until just as we reached the top of the stairway, when he said, "It is customary for *gentlemen* to remember the guide before they go away, by some remuneration for his services."

You pay a dollar for the privilege of going under and through the falls. This is fully explained in circulars, and at the office before you go down; but not a word is said to the effect that you are expected to pay any more after you have paid a dollar; and I would suggest to the proprietors of the aforesaid institution, that, if they wish to preserve the respect and confidence of their patrons, they will put a stop to this sort of begging for a little more money. If I am correct, the whole thing is getting to be in disrepute. After you have paid the advertised prices at a hotel, in a Pullman car, or anywhere else, you are not expected to pay the waiter or porter something extra for being *decently* waited on. I told the guide I did not believe in that sort of way of doing business, and did not think it my duty to encourage or sanction it.

HOW HUGH VANKIRK, OF WASHINGTON, PA.,  
GETS 20 CTS. A POUND FOR HIS HONEY,  
BOTH COMB AND EXTRACTED.

In the first place, he produces from the white clover on those Pennsylvania hills about the finest article of clover honey I ever saw or tasted. He works his apiaries for both comb and extracted honey. The former is cut out of the frames or sections, and put into glass jars, and the liquid honey is poured around it. All this may be quite familiar to you; but when he showed me one of his jars containing 3 lbs. of honey, I raised my hands and uttered an exclamation of surprise. The jar, I should think, is flint glass. It is made by the Hazel Glass Co., Washington, Pa., and the cost, I think, was only about 7 cts. apiece.

Of course, this is almost twice as much as the cheap Mason jars; but if it has the effect of making the *honey* sell for almost twice as much, we can well afford the extra expense of the jar. The honey is put up only as fast as it is sold. None of it is allowed to candy on the dealer's hands; neither is said dealer given so many jars at once that they get dusty and flyspecked, etc. When I took one of the jars in my hand I was almost ready to say I would give 60 cts. for such a jar of honey, just be-

cause it looked so pretty; and when my friend took off the cover and handed me a spoon, and asked me to taste it, then I was fully satisfied to pay 60 cts. for it just to put on my own table. May be my long wheelride had given me an appetite for honey, and an appreciation for nice-looking things; but it seemed to me then I had never before found any honey equal to that, both in looks and in taste. Friend V. insinuates that there is not anywhere in the world any honey equal to that from the Pennsylvania *hills*; and that is a pretty good way to think of one's own locality. Of course, the price of the jar has to come out of the 3 lbs. of honey; and when he leaves it at the stores he gives them 10 cts. commission on each jar they sell; but where he carries it around to the houses, and retails it out, he actually gets 20 cts. a pound for his honey, package thrown in, as I have explained.

Now, then, what is to hinder people in other places from getting a like fancy price for an equally "gilt-edged" product? This clover honey was not as white as the California sage, but it had a beautiful crystalline amber appearance, even though it was so thick that a spoonful could be turned over safely, even during a warm day, without danger of dripping. I will tell you more about friend Vankirk some other time.

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## OUR NEIGHBORS.

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Thou shalt have no other gods before me. . . . For I the Lord thy God am a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth generation of them that hate me, and showing mercy unto thousands of them that love me and keep my commandments.—Exodus 20:3, 5, 6.

I had been having a 25-mile ride on the wheel, the latter part of it over some very long hills. My destination was Silver Lake, Summit Co., Ohio. I sat in an easy-chair to rest after my fatiguing ride, and was having a pleasant chat with the proprietor of the place. Suddenly somebody called him to the telephone, and a minute later he seemed somewhat disturbed, and asked me to get my hat and follow him quickly. I did so, and on our way through the darkness he explained to me that his boys had just rescued a woman on the opposite shore of the lake. They heard something on the other side, and sprang into the electric launch, which was all ready to shoot out into the water with incredible speed by simply pressing a button. They very soon reached the point whence the sounds proceeded. A woman was in the water, and they had rescued her. By the time he had finished telling me about it we were down at the landing. The boys had carried her into one of the buildings; and while the women-folks were busy in getting her a change of clothing, several attempts were made to talk with her; but she did not seem inclined to speak. She was a young woman, well dressed, and of attractive appearance. I decided in my own mind from the first that it was an attempt at suicide. And then I began wondering, as I looked upon her, how it was possible that one just in the

prime of life, with every thing, apparently, to make one rejoice in living, should desire to throw away this wonderful and precious gift from God. While these thoughts were in my mind it seemed to me that I could approach her in such a way that she would speak. I leaned over her, and said something like this:

"My poor friend, we know nothing about what it is that troubles you; yet God knows, and he only can help you in a time like this. Will you not put your trust in him?"

She thanked me; and when I asked her what we could do for her she requested to be sent home, and gave me her street and number. The doctor was soon at hand, and pronounced her in a nervous chill. She was dressed in dry warm clothing, and sent to her home. The daily papers afterward announced that it was, as I had suspected, an attempt at suicide. She was engaged to be married to a young man from Toledo; but just on the eve of the wedding he disappeared, and she afterward learned that he was already married.

Things of this kind have happened so often you wonder why I take the trouble to mention it. I will tell you. In thinking it over I felt impressed that it was my duty to plead with this poor young woman, and to use my poor powers of persuasion to induce her to choose Christ Jesus as her friend and confidant, and to cease to mourn or feel troubled about one who had shown himself so utterly unworthy of her care or regard. Some of you may smile at my simplicity. You may think I ask something that is impossible to the average young man or young woman. Dear friends, I know whereof I speak, for I have been through Satan's toils. God has given you as well as myself a human life to live. It is a great and a precious gift; and if we are loyal and true to the great Giver, the great Father of us all, we shall so regard life. Nothing should induce us to think of throwing it away. *God gave*, and no possible combination of circumstances should make us think we have any *right* to throw away or destroy that which he gave. Satan never misses an opportunity to get into the human heart and persuade one that God conferred no favor in giving us life. In fact, I have sometimes thought that Satan's whole work is only for the purpose of getting his victim to throw away and destroy the life that God gave. We think of suicide because we have broken or begun to break this first and greatest of all the commandments, as in our text. When that smart lawyer came to the Savior and sought to test him by asking which commandment was the greatest and first of all, he replied, "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind. This is the first and great commandment;" and through all my observation, especially since I have been trying to follow the Master, it has seemed to me the greater part of the troubles in this world are because we let something else come *before* God. This young woman had become so bound up—in fact, her whole life had become so centered in this unworthy man—that she had *forgotten* God; and when this man proved false—when he had subjected her to that

terrible humiliation of having to come before friends and foes as a poor, deluded, disappointed woman, she felt as if she could not stand it, and she finally decided to drown her troubles in the oblivion she hoped to find beyond the grave.

Sometimes we ponder and wonder that the world has stood so long, and yet nobody knows—that is, the great part of the world at least *thinks* nobody knows—whether it is possible to escape trouble and humiliation and guilt by suicide. Even the Bible seems strangely silent on this subject. The more I study it, and the more I study humanity, the more I am satisfied that suicide *never* mends matters. Jesus himself said this was the first and greatest commandment of all. We must be loyal and true to God if we expect to be even happy in this world of ours. Many young people have an idea that such attachments, especially if they are of several years' growth, are not easily cured. I think dime novels and similar foolish romantic stories are responsible for a great part of this. A married woman who had grown-up children once confessed to me that she *could never get over* the consequence of an attachment of years before, for another than her husband. She said she could *not* keep his image out of her mind. I said to her something like this:

"Why, my dear friend, you are simply trifling and dallying with Satan. *He* is the one who has got hold of you, and will not let go. You *must* keep such thoughts out of your mind. It is almost as sinful and as wicked as for the intemperate man who says he can not control his appetite for drink. Everybody tells him, and he knows it, that it is dangerous for him to even think about it. His physician and his pastor tell him to keep busily at work at something that is good and honest; and as he values his future life and happiness he must absolutely *pull* his thoughts from all such things. He must turn his feet away from the direction of evil, and he must put the thought far from him. He *must* do it, even if it requires prayers, groans, and tears; and you, my friend, must do the same. You are sinning even now in telling *me* what you have told. But if you have come to me for counsel that my prayers may second your prayers, then I will do what I can for you. With Christ Jesus to help, this thing is not so *very* hard. In a very little time the dear Savior rewards the faithful and honest sufferer. I know this, for I have been in his chains. Oh that I had the persuasive power and eloquence to tell all the world, and to make it believe, that there is no *need* of being in the fetters of sin. Christ *died* that we might *live*, and that we might be *free* from sin; and we have thousands of God's promises to the effect that whoso cometh to *him* he will never cast out."

Let me say further to those who have struggled and battled along this line, there are thousands of cases in this world of ours to show and prove conclusively that this affection—this love between the sexes—can be controlled by reason and common sense. Right among my own relatives I am quite



familiar with a case where, for many reasons of expediency, a woman married a man for whom she had no love at all. Her sister died, leaving a family of little children. It seemed to be a Christian duty, under peculiar circumstances, for her to take the departed mother's place. She was a Christian, and she asked God to help her do her duty. In a very little time she loved this man as much as any woman should love her husband. In fact, she said she feared in her love for him she was forgetting her Savior, for he was a very good man indeed. When Satan whispers to you that you can not stand it—that it will kill you—just say to him decidedly you are going to do your duty, even if it *does* kill. *Duty* and not inclination or feeling must rule. Our feelings are no guide in any thing unless duty and reason stand at the head.

The above thoughts were in my mind as I retired for the night. A pretty little room was given me, that opened out upon the lake, and the full moon was shining. I knelt down and thanked God, as I have thousands of times before, that he had given me a human life to live. Then I thanked him again that he had taught me the importance and the beauty of that first and great commandment. Then I prayed for the young friend who had just been rescued and brought back to life. As I stretched myself out on the beautiful soft bed that had been provided for me, a sudden feeling came over me of thanksgiving to God. Perhaps my long ride on the wheel had something to do with it. I began thinking of the pleasant sleeping-places that seemed to fall to my lot, no matter where I happened to be. Is it not a little singular that one can travel hundreds and thousands of miles, and yet, when night comes, rarely fail of finding a comfortable, pleasant, and tidy resting-place—yes, a resting-place that bears evidence of woman's touch and loving feminine hands. Again and again has it seemed to me that I did not half deserve the dainty beautiful sleeping-apartments that are placed at my disposal. May be some of these hard-working women think we men do not appreciate their efforts in this direction. If it will encourage them any I want to have them know that I at least do. Then from this I began meditating on the beautiful plan which God ordained in the creation of the sexes, and their relation one to another. Next to love to God should be the love of parents; and the love between a young man and a young woman is like the opening flower—the rosebud if you choose. It is one of the most sacred and holy influences that should move men and women. But even here Satan has a foothold. I *admire* the man who is willing to give his life, who gives himself, all he is or all he hopes to be, toward making the woman of his choice happy; but when this woman dies, or when by some strange mishap she is married to another, the man, if he is created in God's own image, should be a man *still*, and make the best of the circumstances. My mind wandered to other things that should make us happy here in this world of ours. I looked out over the beautiful Silver Lake, and then at the bright

moon sending down its genial beams; and just then, away out over the water, a beautiful melody broke forth. Somebody was singing. At first memory groped back through the dim past to recall that song of olden time; and as the singer came nearer I caught the words:

When in thy dreaming,  
Moons like these shall shine again,  
And daylight beaming,  
Prove thy dreams are vain,  
Wilt thou not, relenting,  
For thine absent lover sigh,  
In thy heart consenting  
To a prayer gone by?  
Nita! Juanita!  
Let me linger by thy side!  
Nita! Juanita!  
Be my own fair bride! \*

I had heard the melody hundreds of times in years gone by, but I never appreciated it before then. I presume the words were supposed to be those of an Indian to his dusky bride. Then I thought of the genius who gave the world not only the words but the beautiful music. Why does music touch us and stir us so wonderfully? Somebody has called it the universal language. It affects alike all tribes and all nations, no matter what language they speak. The singer of the night may have been one of more than usual talent, but perhaps not. At any rate, it gave me a new conception of the power and pathos of music; and I thanked God again and again for having made it possible for us to appreciate and enjoy this strange and beautiful thing that is called harmony. Then I thought of poetry—poetry that we find in many of our hymns and songs—poetry to make men better—at least all poetry *should* do so. Then I was permitted to take a bird's-eye view, as it were, comprising all human attainments and accomplishments, including the joys that are in store for those who love God. I never saw it spread out before me as it was on that moonlight night. And then I prayed again that, if the opportunity should offer, I might tell this young woman of whom I have been speaking, of what she tried to throw away when God in his mercy planned her rescue. It came out, as you will notice, through this new and wonderful servant of man, electricity. Friend Lodge has at his place one of the electric launches that were used at the World's Fair. Thousands upon thousands wondered to see them start in an instant with that mighty hidden power. No oarsman could have rowed a boat fast enough to rescue that drowning woman. As I sat in the seat at one time, enjoying a ride on the electric launch, the proprietor told me that under the seat where I sat were stored \$800 worth of storage batteries. These batteries are replenished by the electric current that runs the cars up to Silver Lake. The boat is ready to shoot out in an instant at any moment, day or night, and the power that may be turned on is prodigious. You and I,

\* I would not have the friends think that I entirely indorse this old song. It came out and was given to the world, if I am correct, before the advent of Gospel Hymns; but yet it delighted the young people in the years gone by; and probably through the influence of the beautiful music, to say nothing about the sentiment of the words, it may have brought cheer and brightness to many a troubled soul.

my friend, have been permitted to live in the age of electricity. We do not know what is yet coming; but we may thank God, who has permitted us to see these great conveniences, for his loving regard to us his children. All together, this little time I passed just before going to sleep on that particular night was one of the richest experiences I have ever known in my life. I have alluded to these things before, and told you that it almost seemed to me as if I were in the presence and enjoying the companionship of unseen friends—the companionship of those who know of God, and of his love to us his children. If I had been in the habit of taking drugs and stimulants I might have thought that this was the effect of something of the sort, and that there would be a reaction. No, I had not even been guilty of drinking even strong tea. The exhilaration, what there was of it, came from exercising my muscles, lungs and heart included, in riding over difficult hills just about sundown. And, besides this, I had been praying that God's kingdom *might* come, and his will *might* be done on earth as in heaven. My prayers had been answered to the extent of giving me a little glimpse of heavenly things, and I was *surprised*, but not *ungrateful*, I assure you.

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#### VALUABLE RECIPES FOR A CERTAIN SUM OF MONEY.

Below we give an advertisement verbatim which appeared in a recent horticultural journal:

FRUITS, VEGETABLES, BERRIES, GRAPES, ETC., NEARLY TWICE USUAL SIZE.

Also makes melons, corn, etc., grow mammoth size. A wonderful liquid plant-food. Has never failed. Results guaranteed. Formula sent sealed for \$1. Send 2c stamp for more particulars if wanted. Reputable reference. Address

W. H. GARRETT,  
Box 257, Mobile, Alabama.

As soon as the journal was received I promptly sent a dollar—not that I expected any thing of value, but because I am anxious to see this business stopped, of advertising recipes, etc. Below is what I received, written with a pen, as an equivalent for my dollar:

#### FORMULA.

Sulphate of iron constitutes the plant-food. Take old pieces or scraps of iron and put them into a wooden vessel, filling it about  $\frac{1}{2}$  full, and pour on water until the vessel is full. Let it stand 24 hours, then draw off and use. The vessel may be refilled a number of times with water. If the iron is not convenient take *copperas*, using one pound to four gallons of water. Suspend it in the vessel in a gunny or other coarse-fiber bag, and it will dissolve rapidly. This should be applied after the bloom falls. Pour it about the roots, using one pint on a hill of vines, and a quart on trees 2 to 6 years old, and half a gallon on those over 6 years old. This should be applied once a week until the fruit is half grown.

If used in solid form, put one ounce of copperas about the roots of the hill—not in contact with them—and for trees 2 to 4 years old, 2 ounces; and over 6 years, 4 ounces. Applications every other week for period named. Pieces of iron buried about the roots will give a constant supply.

Pear Blight.—Spread  $1\frac{1}{2}$  pounds copperas under tree out to end of limbs; or bury pieces of iron about the roots; or bore a  $\frac{3}{4}$ -inch hole into the tree and put in a teaspoonful of copperas, and plug up.

Mobile, Ala., Aug. 31.

The above recipe may, it is true, have some value, although I am sure its value is greatly exaggerated. For years statements have ap-

peared in different periodicals, to the effect that iron filings or iron chips are valuable as a fertilizer. The fact that luxuriant and productive pear-trees are so often found closely adjoining a blacksmith shop has been adduced as proof. To test this matter we have at different times taken iron filings and iron turnings from our machine-shop, and placed them around fruit-trees; but I have never been able to see any positive benefit, judging from several experiments. If I am correct, our experiment stations have also tested the matter thoroughly. The idea of boring a hole in a tree, and putting in copperas or any other chemical to cure pear blight, is all folly. The matter has been fully written up. Mr. Garrett may be a well-meaning man, but he has certainly let his enthusiasm run away with his better judgment. I do not know how many dollars he has received besides my own; but I hope he will think better of his plan, and stop taking money from his fellow-men in this way. One dollar should buy a good-sized book telling all about chemical fertilizers, and sulphate of iron among them.

#### ELECTROPOISE, OXYDONOR, ETC.

—We are pleased to notice that that excellent periodical, *Electricity*, has seen fit to copy a large part of our article given in issue for Aug. 1; and in speaking of the Patent Office and the way in which it was finally persuaded to grant a patent, it says:

It now seems that the United States Patent Office has also had its skirts besmeared in the same puddle.

At the close of the extract they sum up as follows:

As stated further along by our contemporary, it is certainly a remarkable position for our government to take that it will grant a patent for a class of things which intelligent men the world over consider to be frauds.

It seems, however, that such is the position taken by our Patent Office, and if this be so in one case, where is it going to stop? The spiritualist, the necromancer, and the fakir of every kind will necessarily have to be protected, and the honest man will go without his dues.

While this matter is again before us, permit me to say that two persons have rated me soundly, because they believe Oxydonor to be an honest invention. One of the writers goes so far as to quote Scripture, saying, "Whether this man be a sinner or no, I know not; but one thing I know, that, whereas I was blind, now I see." I give this to show how hard it is many times for people to give up their delusions. Now to business: If it is neither electricity nor oxygen (as they still persistently claim) it must be some new force just discovered, and hitherto unknown to the world. But the question then arises, Why does not the world, especially the scientific world, receive it with joy? Why is it not heralded from one end of the world to the other as were the X rays which we are all now familiar with? Has the world been backward? have scientific men been slow in investigating and assenting to the claims of this wondrous thing brought out by Roentgen? Let those who defend Electropoise and Oxydonor explain if they can.



## CIGARETTE-SMOKING.

A lady whose husband keeps a drugstore in Dayton, O., very innocently remarked recently that the cigarette business was a good business, because, when a man once commences buying them, he *never gives it up*. One of the company suggested that the tax must make it difficult unless they had a pretty good trade; but she said it took only a little while to make enough to pay the tax. Then somebody remarked that prices had been greatly advanced; but she replied again that that made no difference; for the person who commences using cigarettes would keep on using them even if the prices were advanced from a nickel up to a dime per package. No wonder the victim never gives it up, for it is only the opium habit under another name. We are making progress in our pure-food laws, especially here in Ohio; but what about letting druggists and others push the opium business in the way I have indicated above, notwithstanding the fact that our schoolchildren are being ruined, body and soul, and our asylums and infirmaries are being constantly recruited at an alarming rate by cigarettes?

**FOR SALE.**—25 Sash, glazed,  $3\frac{1}{2}$  x 8 ft. x 2 inch check, glass 12 x 12; also 12 sash, regular make,  $\frac{3}{4}$  x 6 in. x  $1\frac{1}{2}$ ; about 1000 ft. 12 x 12 glass, also sash-bars for same. A lot of pipe  $\frac{3}{4}$  in., 1 in.,  $1\frac{1}{4}$  in., and some 2 and 3 in.; also a lot of pots, 4,  $4\frac{1}{2}$ , 5, and 6 in. Will sell for one-half price of new.

J. S. WARNER, Medina, Ohio.

## What They Say about the Pouder Honey-jars.

TACOMA, WASH.

Walter S. Pouder, Indianapolis, Ind.:

Dear Sir:—Last shipment of jars arrived o.k. There was not one per cent loss on the entire shipment, and have never had more than two per cent loss on any shipment from you. I consider your method of crating the best that I have ever seen.

Yours truly,

G. D. LITTOOY.

## HONEY-JARS.

1-lb.. with Corks, \$4.50 per Gr. Labels for same, 60c per gross.

Cartons, Shipping-cases, and every thing in the Apiarian line. Catalog free.

Apiary,  
Glen Cove, L. I.

I. J. STRINGHAM,  
105 Park Pl., N. Y. City.

## FARM BEE-KEEPING.

The only bee-paper in the United States edited exclusively in the interest of the farmer bee-keeper and the beginner is **THE BUSY BEE**, published by

Emerson T. Abbott, St. Joseph, Mo.

Write for free sample copy now.

## QUEENS BY RETURN MAIL.

Daughters of best imported queen mother, warrant-purely mated to drones of imported stock from a different source; hence, a direct cross. 12 years as a honey-producer on a large scale has taught me what good queens mean to the producer, as well as how to rear them. Price of queens, 50c each. Safe delivery and satisfaction, or money refunded.

L. H. ROBÉY, Worthington, W. Va.

Either 3 or 5 banded, 60 cents each; 6 for QUEENS, \$3.00. Nuclei and supplies cheap.  
CHAS. H. THIES, Steeleville, Ill.

## Dovetailed Hives,

Sections, Extractors, Smokers, and every thing a bee-keeper wants. **Honest goods at close honest prices.** 60-page catalog free.

J. M. JENKINS, Wetumpka, Ala.

## 25 Cts. PER YEAR!

for the best agricultural and stock-breeders' paper published,

Stuart's Agriculturist.

Agents wanted! Bicycles, etc., free. Address

WHITWORTH BROS.,

Printers & Pub'rs, 60 High St., Cleveland, O.

## Gleanings for One Whole Year, 25 Cents.

Will furnish GLEANINGS one year—24 issues—to a new subscriber, and one untested Italian queen, during the month of October only, for the price of the journal alone—namely, \$1.00. These queens are catalogued at 75 cents each. By sending us \$1.00 you will get the queen, 75 cents, and the journal for only 25 cents.

If you are already a subscriber, and would like to get the queen, send us \$1.00 with a new name for GLEANINGS, and we will send the queen to you, and the journal to the new name sent.

Remember this offer is good only until Nov. 1.

## The A. I. Root Co., Medina, Ohio.

## THE A. I. ROOT CO'S Shipping-cases for Honey,

AT THEIR PRICES—THE FINEST MADE.  
CASH FOR BEESWAX.

M. H. HUNT, Bell Branch, Mich.

## MAKE MONEY! YES. HOW?

With poultry, bees, and flowers. Particulars free.

COOK BROS.,

Scio, - Harrison County, - Ohio.

## No cheap Queens to sell; but the best.

Golden 5 band, or 3 band from imported mother. Untested, 75 cts.; tested, \$1.00.

L. BEAUCHAMP, Box 613, San Antonio, Texas.

## Queens,

Untested queens, 50c each; tested, 75c; Breeders, \$2. Either leather or golden. My golden breeders breed all 5-banded bees.  
W. H. LAWS, - Lavaca, Ark.

**QUEENS.** Untested golden beauties, or 3-banded, 45 cents each. Write for wholesale prices. I have good bees. To be convinced, order a sample queen. This is a money-order postoffice.

DANIEL WURTH, Falmouth, Rush Co., Ind.

**FOR SALE.**—500 very choice Italian red-clover queens at 50 cts. each;  $\frac{1}{2}$  doz., \$2.80; tested, 75 cts. Our bees made 50 lbs. per colony of red-clover honey this season. 15 years' experience in queen-rearing.  
LEININGER BROS., Ft. Jennings, Ohio

**FOR SALE.**—Italian queens, 50 cents each.  
MRS. A. A. SIMPSON, Swarts, Greene Co., Pa.



## GARDENING FOR OCTOBER.

Well, friends, gardening in the open air is pretty much over unless it is late-sown wheat and rye; but this is farming rather than gardening. Spinach, dwarf Essex rape, and a few other hardy vegetables, may be put out yet, but it is a little unsafe. Onion-sets have sometimes done very well, especially the Early Pearl when planted early in October. A good many growers recommend putting out strawberry-plants during this month; but unless you have learned the trade, and take some special precaution not to have them thrown out by the frost, you will waste your time and plants. If you have a soil that never throws plants out by freezing, or if you cover your plants with mulch, and do it just right, you may not lose many. If you have some sashes to put over your plants set out in beds, of course you can go on pushing them through October and perhaps November. Asparagus-roots may be planted, but I believe most people have decided to put it off till spring. Raspberries, blackberries, and all kinds of fruits do as well as, and many times a great deal better than, when planted in the spring. Horseradish-roots will always grow if planted at any time when the ground is not frozen. Fix up your hot-beds, greenhouses, and cold-frames, if you have them; and if you have not, and love gardening, I would advise you to get a sash or two, and see what wonderful things can be done by a little protection. Try a few first; and if it requires more care than you are willing to give during the sudden changes of weather, then do not invest any further. Better gather your crops if you have not done so, then slick up the garden and sow it to rye; or if you do not care to do that, ridge up at least a part of it, and get ready to plant early stuff on the top of the ridges the first thing in the spring.

## THE CRANDALL CARRANT.

We come to the conclusion that the Crandall currant is good for pies, jelly, etc., the same as the common currant, but the skin is rather tough. Last year we made a drink which was right good. We made it like wine, only we did not let it ferment. We canned it like fruit, and it kept nice and sweet.

Berkeley Springs, W. Va., Aug. 1. H. L. WISE.

## MAKING A BREED WEEDER OUT OF A GARDEN-PLOW.

*Friend A. I.*—Last year I bought a garden-plow, a one-wheeled affair; but the wheel is larger than those seen in the market, and is so arranged that pressing on the handles tends to shoot the plow forward. I had a scuffle-hoe, made after the description given in GLEANINGS about a year ago, but I longed for one of those Z. Breed weeders. I wrote the company that I thought I could fasten the weeder part on my one-wheeled plow, and that I preferred one wheel to two, as they have it arranged. I paid them \$1.50 for the fingers and head pieces, and fastened them on my plow with a single bolt. I have just plowed my peas, six inches high, with the weeder, and it did not disturb a single pea. If the weeder is used at the right time it is one of the best tools ever invented.

I am using a Breed weeder No. 9 for sweet potatoes.

Don't you think we could arrange to publish a small book on sweet potatoes? I think I have it down to perfection.

Lebanon, O., June 16.

J. Q. MULFORD.

## Special Notices in the Line of Gardening, etc.

By A. I. Root.

## REPORT ON POTATOES FOR 1897.

At present writing, prices of potatoes for table use are from 75 cts. to \$1.00; and in a good many places in the United States you can not get nice potatoes at the groceries for less than about \$1.00 a bushel, and they are worth from 50 to 75 cts. at wholesale.

Somewhat to our surprise, the Freeman this year has given us not only our handsomest and best-eating potatoes, but the yield has been almost as great as the Thoroughbreds, and the Freemans are the cleanest and nicest-looking potatoes of any thing we have tested. Quite a few have found fault because Terry and Maule gave the Freeman such a boom. My opinion is that these two friends of ours deserve the thanks of the whole wide world for thoroughly disseminating so valuable a potato. The New Queen is quite a little earlier than the Freeman. Indeed, it gives potatoes of fair size for table use about as early as any potato I know of, unless it be the White Bliss Triumph. The latter has not done so well with us this season as last. A great many of our potatoes have been scabby—that is, here on our own grounds—probably owing to the large amount of stable manure we have used on our soil. The potatoes grown for us, however, by Wilbur Fenn and others in Summit Co., are free from scab, and beautiful in shape, and fully up to their usual standard, although perhaps not as large as usual. The Sir William is medium early, but too prongy to please the average market. It certainly can not compare in looks with the Freeman; but it has again shown the peculiarity of being dry and mealy, even when dug when half grown. The Monroe Seedling, when grown by Wilbur Fenn, is almost as handsome in shape as the Freeman, and comes pretty close to it in quality. Manum's Enormous outyielded every thing by far (Thoroughbred next), and the quality is very good for so large a potato. It is also one of the very best keepers known, while the New Queen is perhaps the poorest keeper of all, because it will sprout when it is springtime, no matter where you put it. The New Craig is not yet ready to dig.



## COMB FOUNDATION AT A DISCOUNT.

In order to reduce stock of comb foundation in the hands of dealers and branch offices, we offer, for the month of October only, 6 per cent discount from our prices of foundation, both wholesale and retail. You can order from St. Paul, Minn., office at 1024 Miss. St., or Chicago office at 118 Michigan St., or Syracuse, N. Y., office at 1635 West Genesee St. Those on the north Pacific coast can also secure foundation from Buell Lamberson, 180, 182 Front St., Portland, Oreg., at the same reduction from his prices. Remember, this offer is only for orders received during October which call attention to this offer, and for present stock while it lasts, and not on foundation made to order. Price of foundation will be no lower next season. If you know pretty nearly what you will need, here is an opportunity to save some money by ordering now.

## HONEY MARKET.

With the coming of cooler weather our honey trade has taken quite a start, and orders for both comb and extracted are coming in freely. We offer in 60-lb. cans, 2 in a case, water-white California honey, or clover and basswood, or willow-herb, at 6½¢ per lb.; light amber California honey at 6¢. Any of the above in 5-case lots, ½¢ per lb. less. Two barrels of tupelo honey still on hand at 6¢. Barrels hold about 350 lbs. each.